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Agricultural.

SUMMER FEEDING FOR DAIRY.

We have said that there is no one food that comes as near to being a balanced ration for milk cows as our mixed meadow grasses, when in just the proper condition. The pastures would be as good if they were as fertile and yielded as good crops. Unfortunately many of them are badly injured by the growth of bushes, weeds and moss, until it requires more travel for the animal to gather her daily ration than she needs as exercise, and even then she often fails to secure enough.

But more than that there are certain seasons when the pastures give but an inadequate ration, and the meadows would be but little better excepting in possibly furnishing a larger supply. Early in the spring when the grass first starts it is succulent and tender, too much so. It is too watery to keep up the milk to its standard of fat, and to maintain the flesh of the animal. Later on when the season is dry the grass becomes woody, or contains more fibre in proportion to the protein and carbohydrates. It may be said that in the average season the grass in June, and then again later in the fall, after the fall rains have given it a good growth, is when it is the most valuable.

Nearly every farmer now has learned the value of having green, succulent food to give to the cows if the pastures dry up or are insufficient. If the spring is very dry there should be rye or oats for them. Later on oats and corn are mixed. Still later the corn-fodder, sorghum, rape and cabbage, and in the late fall pumpkins and roots, with ensilage for winter use. All but the last are easily to be had by the man who has but one or less than a half-dozen cows. It is generally thought that it will not pay to erect a silo for so small a number, though we think a narrow box about twelve feet long, five or six feet wide and ten feet deep could be so built as to keep ensilage as well as a large silo, and that would hold enough of a little more than should be fed to six cows in 150 days. It might be larger and hold a supply for the scant times during the summer, obviating the having so many forage crops growing. Those who were fortunate enough to have ensilage on hand during the drought last summer are so enthusiastic as to declare that its use is more important and more valuable at such a time than in winter.

Succulent food, however, is not the only need of the cow in summer. If she is naturally a good producer of milk and butter fat, when she has plenty of grass and green feed, she will draw upon her flesh to furnish the solids in the milk. She will grow thin and lean, even more than her looks indicate. If slaughtered at such a time, the knowing butcher would say her meat was not solid and firm. Water has taken the place of the solids that she has given out in her milk, and to let the meat hang twenty-four or forty-eight hours after killing would result in a heavy shrinkage by the evaporation of this moisture. Country butchers need to refuse to buy meat by dressed weight until it had been hung at least twenty-four hours, unless they were allowed about five per cent. shrinkage, and often more than that in the case of cow beef.

We believe it will pay to feed some grain every day, even when the pasture is good. When the grass is at its best it may be but little bran and cornmeal. When it is too dry and green, or when feeding green corn or other green crops, increase the portion of cornmeal. When it gets dry and coarse give more bran. By this feed the solids and fat in the milk can be kept up, and it will also keep them in the flesh. There will be no more cows brought to the barn in the winter to need all the winter grain feeding out them in their normal condition. We try to keep our milk cows in such condition in the summer that if one had a cow her leg she would have made very good beef at least. And we never had a cow with milk fever, and but few of garget, and in the case of old cows that we bought, either knowing or suspecting that they were subject to that or some other disease.

The keeping of the cow in an even condition of flesh the year through was not the advantage of grain feeding in the summer. We found cows so treated did not shrink in milk production so soon. They would give milk more nearly up to the peak of the calf, and in some cases quite up to it, even though we reduced the ration a few weeks before they became fresh.

As we fed the grain at night there was no loss of a boy and dog to drive them home. They were as punctual to their supper time as the hired men, and we could not say

much more than that. They were quiet while they were being milked, and we thought the grain fed dry was thoroughly digested during the night as they chewed their cuds. When fed in the morning, before we turned them to pasture, we did not think that it was well digested. They were quiet all of the time, which a chronically hungry animal is not.

When the flies began to be troublesome in the summer, we would keep the cows in a dark stable during the day, and give the grain about noon, then let them to pasture after milking. Luckily we were not much troubled that way, as there was usually breeze enough on our hills to keep the flies away, and we had no bottled cows. Sometime the oxen, which lay the egg for what is called the grub in the back or warbles, would be a little too plenty, but they never seemed to trouble a cow that was tolerably fat, but only lean stock. We think the egg will not hatch in a layer of fat. We have bought

will pay farmers in the Eastern States to grow more beef cattle, feed them liberally, and sell them young. This does not mean that in sections where dairying is profitable they need to change to the beef breeds. The males and some of the heifers from the dairy breeds can be so fed as to make good beef at two years old. They may not prove equal to the Herefords and Shorthorns, or the Angus of the West, but they can be made equal to or better than some of them. They can be profitably grown on our good pastures, fed on the corn and ensilage of our fields, and sold at prices which may not be as high as the quotations in Chicago markets, but high enough to yield a profit to the feeder. There are yet some who would prefer to buy cow beef or bull beef at a fair price than to pay the prices now asked, and we can well remember when a farmer seldom failed to salt down at least one barrel of corned beef for family use every fall. Then if he wanted a "New England boiled

Dairy Notes.
The theory that the richness of the milk, or the amount of butter fat and other solids in it, depends more upon the animal than upon the food given to it, receives some corroboration from the fact that the milk of the goat is said to be much richer than that of the cow, two quarts of goat's milk being equal in nutritive qualities to three of cow's milk. As is well known, the goat is a forager, eating almost any food they can pick up, but we do not think the above statement is true of the goat that has fed upon the proverbial diet that has fed upon the humorists to feed upon, to make cans, hoop skirts and circus posters. To produce milk of the above quality they must be well fed with good food. They may eat many plants that the cow rejects, but the attention of our scientific men has not, as far as we know, ever been given to a study of those plants to ascertain how much of protein or milk-producing food they contained. And the above comparison

that our hillside pastures would not supply their wants, and must be supplemented by too much grain, if we desired to keep them up to their full capacity for milk production. A more extended study of them and of their records has modified our opinion to some extent. If one has good pastures where the cows can eat their full without traveling miles to get it, and then often failing to get more than half enough, we believe the Holsteins can be made to pay. If one can make a well-balanced ration of hay and grain in winter, and will feed it liberally enough, we believe they will pay, and this not only in the sale of milk, but even in butter-making. As our readers know, we have long claimed that if the assertion of our professors at the agricultural colleges was true, that no amount or quality of food could raise the amount of butter fat in the milk above the normal production of the cow, that normal production was a point not often reached by the food and methods of the ordinary farmer. The cow or the

Cultivation of the Crops.
If good satisfactory crops are grown, at least such as are planted, they must be well cared for. The first thing of importance is the properly fitting of the ground before the planting is done.

A field nicely plowed and thoroughly harrowed before it is planted will require but a small amount of labor in the after cultivation of the crop, compared with another field in which this preparatory work has only been half done.

With large areas to plant and cultivate, and with hired help scarce and difficult to get, even at high prices, it is necessary to do all kinds of work possible with horses and suitable implements. And to the credit of inventors it may be said that there is a long list of farm implements and tools of the best make, and adapted to all kinds of work that it may be necessary to perform, from which to select. And further than this, better work can be accomplished with these than by the old process of hand labor.

But for the best success with these improved labor-saving implements, the preparatory work of plowing and harrowing, as before stated, should be well and thoroughly performed.

Wherever possible there should be large fields devoted to these crops, at least the rows should run the longest way and also be straight and of uniform width, in order that the work of cultivation can be the most thoroughly and efficiently performed.

Not much hard planting of corn or even of potatoes in large areas is now done. This would be too slow and laborious a process, besides the improved horse planters not only do the work so much faster, but actually better than it can be done by the old process of hand labor.

Even in the great corn-growing States two rows are planted at a time, requiring only one man for the work, while at the East it usually takes two men for a one-horse, one-row machine. In this way it is easy to plant a large acreage in a little time. For the proper working of machines the surface of the lands in crops should be free from stones or other obstructions.

The cultivation of corn should be commenced very soon after it is planted. This will serve to keep the soil fine, mellow and free from weeds. Generally this should be shallow rather than deep. A widespread, light, smoothing harrow, with teeth slanting backward, or an implement known as a "weeder," which is much used at the East, serve an excellent purpose in the cultivation of the crop, until it gets too large.

With either of these a large area can be gone over in a day. The surface soil is finely stirred in this way without regard to the young corn. Of course it is necessary to begin the cultivation very soon after the crops are planted, in this way not giving the weeds a chance to get a start, and the process should be repeated once a week at least, for the greatest benefit to crops. If the soil is dry this frequent, shallow cultivation will keep it mellow and fine, making it a good mulch to preserve the moisture underneath for the benefit of the growing plants.

As the corn gets too large for these implements, then others should be substituted. There are various kinds of these especially adapted to crops in different parts of the country. The best should be faithfully used, and as long as the size of the crop will admit. By this time the corn or other crop will be so far advanced as to occupy the field, leaving little chance for grass or weeds.

There is an old adage that "tilage is manure," and as in a certain sense this must be so, it will be seen that a continuous and proper cultivation of corn and other crops must result in a double benefit to them and the soil. Without it but little would be accomplished; with it the possibilities are indeed great.

E. R. TOWLE.

Convenient Shipping Packages.

One of the surest ways for a farmer to sell his goods at the best market prices is to pack them in the most convenient packages which the markets afford. Dealers are much more likely to take goods that are just suited to the demands of their trade than those which are packed in inconvenient and unfamiliar styles. Nearly every city market has its special favorite sizes for baskets, crates and boxes, and it is wise on the part of the shipper to study these peculiarities before sending his goods to sell. On the other hand, it is sometimes well for the farmers of a locality to use a certain uniformity of package for shipping different produce. There might be some advantage in adopting some convenient sizes of packages for general use all over the country. As it is today we have the greatest imaginable variety of crates, boxes and baskets, as well as barrels, half-barrels, bags and sacks. All these add greatly to the complication of market reports, making it necessary for a man to compare the quoted prices for produce from one section with those from another to do a good deal of figuring. A generally accepted form and size of crate, basket and barrel would make it better for all.

There is, of course, another side to the story. Farmers of one locality, who have made a specialty of one particular article of farm production, strive to give an individuality to the article's appearance when sold on the market. Thus a new form and size of package will attract attention, and the farmers of that section adopting that peculiar package for their goods establish a sort of trademark. But if the size is inconvenient, it is not likely that it will help to sell the goods. One must follow the lead of the market a good deal. As an illustration, a good many Western shippers have for years been sending hay to New York in small bales. Dealers in hay in that city prefer hay packed in large bales, and they discriminate against the small bales to the extent that the latter sell from two to five cents per hundred-weight less. The quality is the same, and the difference is the farmers' loss.



A FAMILIAR FARM SCENE.

cows in the fall that had been poorly kept through the summer, and they would have scores of them, while the cows we had kept through the summer had none, or but few.

At present prices of grain it may seem to be hard to buy it to feed while the cows are in the pasture, but at present prices of butter, cheese and beef, we think if one can convert grain into either there is as much chance for profit as if the price of all were but half as much. We have nothing to say now about selling milk to the contractors.

Live Stock Notes.

Last fall one Iowa farmer sold a carload of fat cattle for \$100 each, and another sold ninety-nine head at \$83.35 each, or \$2931.45 for the lot. Both lots were grades, two years old, and sired by pure-bred bulls of one of the beef breeds, and probably from high-grade cows. It is such prices as these to the farmers or stockfeeders that causes beef prices to be high, and it is the selling of fat cattle at two years old that is causing our census reports to show that the number of beef cattle is much less in the United States now than it was a few years ago, when few thought of selling an animal for beef before it was three years old, and many kept them a year or two longer, feeding only what were called growing rations, until about six months before they were to go to market. The four-year-olds of those days seldom averaged to weigh any more than the two-year-olds of today, and they were not as good beef for the dealer or the consumer. There was too much tallow for the meat, as the fat had not been put on until after the muscle or lean meat had been formed.

Thus the fat was piled up around the kidneys and other internal organs, and since the use of candles has been abandoned it has usually been sold for much less than the price paid for the whole animal, or there was a loss on that to be made up by the higher prices of other portions of the meats. Under the present best methods of feeding the fat is formed along with the lean meat and mixes with it, not in excess of what the consumer is willing to have in his roasts and steaks, and such cattle as those named above have but little tallow. As they have become more plenty prices on tallow have advanced, because it is being used for many other purposes than in candles or greasing cowhide boots.

But under present conditions we think it

dinner" he did not have to go to a restaurant for it, nor to the market to get the meat or the vegetables.

The meat was as good and the vegetables were usually better than he would buy today, and the cost was not felt as it is when he has to pay market bills. We hope to see a return to this practice in New England at least, and in other Eastern States. It is a poor policy when the land owner decides that he can buy food of any kind cheaper than he can grow it, unless it may be something not adapted to his soil or climate, or he has some special crop in which he is an expert, and which he needs to devote his whole time, and which he expects will yield more income than he could obtain from other crops.

One of our exchanges says that the scrub steer pays no better in New England than in the Western States. We are not sure of the correctness of this statement, because in many sections of New England buyers accept a poorer quality of beef than that demanded by the Western packers, and think they are fortunate if they do not have to pay more than the highest prices quoted at Chicago market. Especially is this true of those who like to buy a half or quarter of an animal of a neighbor, eating some fresh as long as cold weather will keep it sweet, and then putting the rest in pickle, to be used as corned beef or salt beef until the time comes for another to be killed.

Because we say this, however, we do not mean that to breed grade bulls to scrub cows will be the most profitable method of growing beef in New England. But a small part of our farmers here could be persuaded to purchase pure-bred and registered bulls at \$4000 to \$5000 each, as the amount of stock kept and raised would not warrant such an outlay. But there are many families that have become famous because they have been prize winners in a show or two, that could be bought for much lower prices, and if one farmer cannot afford to pay what is asked for such an animal, let more than one unite to purchase him. He may serve all the cows in a neighborhood that are thought fit to breed beef animals from.

Jesse Humphreville has moved his stable, comprising six head of horses, from Hampden Park, Springfield, to Granite State Park, Dover, N. H.

was made with certain improved breeds of goats in England or Continental Europe, that have been for years bred with a view to milk production or the making of goats-milk cheese, so that it is claimed they produce about four quarts of milk a day. If this is the case they have undoubtedly been fed with this end in view. We are willing to admit that the goat well cared for may be the poor man's cow, being cheaply kept, and producing milk enough for one family, but we are not prepared to accept the idea that any number of them can yield as much milk as a good Holstein or make as much butter as a good Jersey or Guernsey, unless they consume as much food, and have food as good in quality, even though it may be less expensive in the market.

While the policy of those who are raising young cattle for beef is now acknowledged to be a forcing feed almost from birth, that they may be well fattened at from eighteen to twenty-four months old, that is not the way to raise the heifers that are intended for dairy cows. They should be fed liberally to keep the growth, with skim-milk and a little flaxseed meal jelly, until they can eat heartier food, then slops of milk feed, bran and oatmeal, with clover or choice early-cut fine hay, when not in grass. Even on grass the skim-milk should be continued for a time if it can be had in sufficient amount. Whole oats are good, but we like well-cured oat hay quite as well, or when on grass give about one quart of bran dry and mixed with a handful of oats. Keep them out of cold rains and wind, and give good beds in warm stables. Handle them gently every day, brushing and petting them, and there should not be a day in which there is not a growth in size and a development toward maturity. They should be of large frame and vigorous, and such calves should be mature enough to drop their calves at two years old if of Jersey blood, and at two and a half years if of the slower maturing breeds. A calf that is reared in this way, if from a good productive cow, and a sire of a milking or butter making breed, should be more productive than can often be bought in the market.

The Holstein cows have never been our favorite breed, even when selling milk, which was in part due to the high prices at which they were then held, and in part to the fact that we believed them to be such hearty feeders, as large cattle should be,

horse or the man that has enough, and not too much, of the proper food, must have the ability to do better than the one that gets half or three-quarters of the natural needs for production or work, if the food is properly proportioned.

We cannot blame the Holstein cow, if turned out in a scanty pasture where she has but about half rations, her milk is thin and blue with but little butter fat in it. Having been bred to produce a large amount of milk, it is more natural for her to fill up the empty space in her stomachs with water, and then give the water out in her milk, than to reduce the amount she yields, even as it would be natural for the Jersey to reduce the amount rather than the quality of her product. We do not mean to be understood that the Holstein milk, under the best of care, is likely to show as large a percentage of butter fat as that of the Guernsey or Jersey, but when amount of milk and butter fat are considered, the Holstein has shown in some herds the capability to produce as much butter and at as low a cost as some of those generally known as the butter breeds. But this is only possible where the feed is ample in quantity and quality, and the exercise needed to obtain it is not too great. It should be always remembered that in its native home the Holstein, like the Jersey, is not accustomed to roaming over large territories to gather its food. They are more frequently tethered out than turned into the pasture. The Ayrshire at home climbed the hills and mountains of Scotland, and their descendants can climb and browse almost equally well in New England. Even the Jersey have a desirable agility that helps them, but the heavier breeds are not adapted to it. Possibly the Swiss, of which we have seen but few specimens, or the Canadian French cattle, which we never saw, might prove good as hill climbers, or be able to take wide ranges in search of food, without reducing their flesh or the capacity for milk and butter production, but on that we express no opinion. We simply desire to set ourselves right in regard to the Holsteins, to which we feel we may have done injustice in the past, because we saw them under such conditions as we now think were unfavorable to their best development.

Searchlight (2,034) recently worked a mile at Charter Oak Park in 2:04.

Agricultural.

Baby Beef for Market.

There was never a more promising time for the farmer or cattle grower to engage in raising the right kind of beef for market, and the man who has the patience and wisdom to look ahead a few months will realize good profits. Beef and cattle are not going to be much lower for several years, for the supply cannot keep pace with the growth of our population until our ranges are stocked more thoroughly. We have fallen behind in stock raising, while population has enormously gained on us. We are just realizing this, and either people must stop eating meat or be willing to pay more for it than in the past.

There are special opportunities for the man who can raise baby beef for market. This is the fancy beef which the best trade demands, and this trade is less affected by rising prices than the cheaper trade. People with plenty of money in our cities will continue eating beef as before, but they will demand a sweet, tender, juicy beef. This comes from the young calf which is raised and fed for the beef market at once, and which is sold within a year or a year and a half. The beef of such an animal is as much superior to that found on a steer which has been in existence for several years and has grown hardened and toughened to a rough life on the range, as the meat of a spring chicken is better than that of an old rooster. This baby beef, as it is called, is the kind of meat in demand in all large city markets, and it commands the fancy prices. The tough range steers that have been fattened a little toward the end of their lives have no show in competition with this.

Baby beef can be raised cheaper than tough steer meat, because the fattening and growing process is begun when the calf is first born, and it is kept up rapidly until the animal is ready for market. It is during this early period of growth when the increase in weight is steady and rapid. Every pound of food is well paid for, and it makes a very large percentage of increase in weight. Even with prices the same there would be more profit in raising beef in this way than in keeping a steer several years, but with the much higher prices the profits are a good deal more satisfactory.

Ohio. E. P. SMITH.

Butter Market.

Although no business was done on Tuesday the market may be called steady at 22 1/2 to 23 cents for extra Northern and Western creamery, with buyers generally unwilling to pay more than 22 1/2 cents. Best Eastern is 22 cents, fair to good 20 to 21 cents. Firsts are 21 1/2 to 22 cents and seconds 20 to 21 cents. Extra dairy is 21 1/2 to 21 3/4 cents, and firsts 20 cents. Extra imitation creamery 20 cents and firsts 19 cents. Ladies 18 to 19 cents, and renovated 18 to 20 cents. Boxes and prints in fair demand, extra northern creamery 22 1/2 to 23 cents, extra dairy 21 1/2 to 22 cents, fair to good 19 to 21 cents in boxes. Prints, extra creamery 23 to 24 cents, extra dairy 22 cents, common to good 20 to 21 cents. Jobbers' rates about two cents higher.

The receipts of butter at Boston for the week ending June 14 were 39,676 tubs and 28,789 boxes, a total weight of 2,309,077 pounds, against 2,320,309 pounds the previous week and 2,077,467 pounds for corresponding week last year. Included in last year's receipts were 124,094 pounds in transit for export.

There were no exports of butter from Boston last week. For the corresponding week last year the exports amounted to 156,535 pounds. No exports from New York last week.

The Quincy Market Cold Storage Company added 31,316 tubs to its stock of butter last week, which now stands at 49,682 tubs, against 53,313 tubs a year ago. The Eastern Company put in 3000 tubs, and reports a stock of 7622 tubs, against 13,961 tubs last year, and with these added the total stock is 57,304 tubs, against 99,474 tubs same time last year, a decrease of 42,170 tubs.

NEW YORK MARKETS.

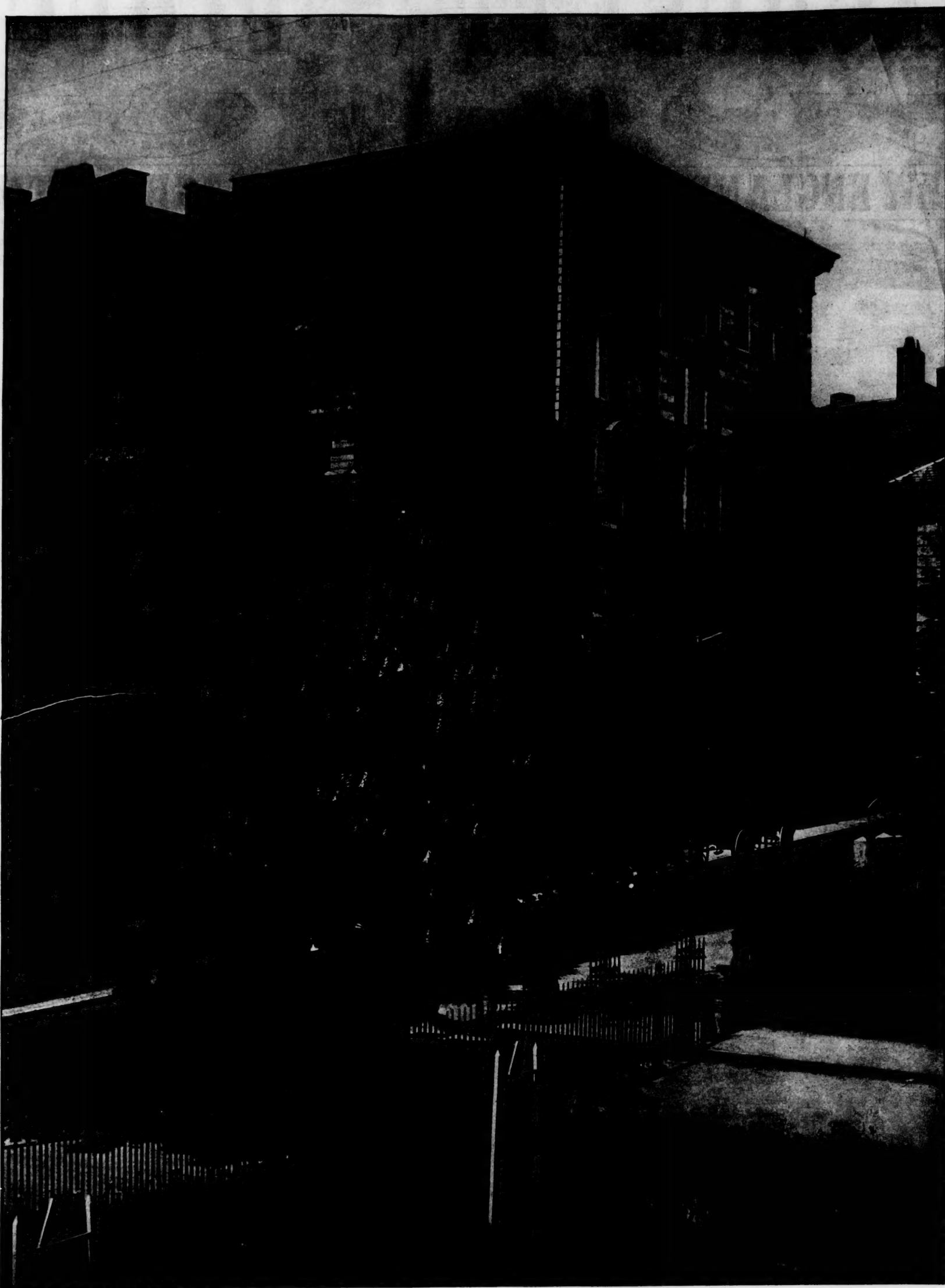
Domestic potatoes higher, and firm. Southern dull and weak. State and Western per sack, \$2 to \$2.25, per 100 pounds \$2.12 to \$2.37. Southern Rose No. 1 per barrel \$2.50 to \$3.50, Chili white \$2.25 to \$3, Chili red \$2.25 to \$2.75; second \$1.50 to \$2, and culls \$1 to \$1.25. Onions in fair demand, New Orleans at \$2.50 to \$2.75 a barrel, \$1 to \$1.15 a bag. Bermuda \$1.65 to \$1.75 a crate. Southern per basket, potato \$1 to \$1.25, and white \$1.50. Beets \$2 to \$2.50 per hundred bunches, and carrots \$1 to \$1.50, with radishes at 50 to 75 cents. Yellow turnips \$1.20 to \$1.50 a barrel. Southern squash \$1.25 to \$1.75 for barrel crate. Cucumbers, Savannah 50 cents to \$1 a basket and Carolina 75 cents to \$1. Egg plants, Florida half barrel crates \$2 to \$3. Asparagus per dozen, Colossal \$3 to \$4, extra \$2.25 to \$2.75, prime \$1 to \$2 and culls 50 to 75 cents. Rhubarb per hundred bunches \$1.50 to \$2.50.

Cabbages in light supply, but dull, barrel crates \$1 to \$1.50, Norfolk barrels \$1 to \$1.25. Cauliflowers, near by \$2 to \$4 a barrel. Lettuce 40 to 60 cents, and spinach 40 to 50 cents a barrel. String beans in fair demand. Carolina 50 cents to \$1 a half-barrel, 25 to 30 cents a bushel. Norfolk \$1 to \$1.25 a basket for green, 75 cents to \$1 for wax. Baltimore green \$1.25, and wax \$1 a basket. Green peas in fair demand and steady at 50 cents to \$1 a basket for Jersey, 75 cents to \$1.25 a bag for Long Island. Southern green corn from \$1 to \$2.50 a hundred ears. Florida tomatoes 50 cents to \$1.25 a carrier. Savannah 75 cents to \$1.50, and Mississippi flat cases 65 to 75 cents.

Apples are steady, good to fancy Baldwin \$3 to \$6 a barrel. Roxbury Russets, prime to fancy \$4 to \$5.50, inferior Russets \$2.50 to \$2.75, Ben Davis \$3.50 to \$4.50, red winter, fair grades \$2.50 to \$3. Florida and Carolina peaches, poor to good \$1 to \$2 a carrier, and Georgia 30 cents to \$2.25. Boston plums \$1 to \$2 a carrier. Cherries per pound, large dark 10 to 11 cents, large light 8 to 9 cents, small and medium sweet 7 to 8 cents, sour 5 to 7 cents. Strawberries dull, up river and Jersey fancy at 8 to 12 cents a quart, ordinary 6 to 9 cents. Gooseberries, extra large 8 to 12 cents, small to medium green, 4 to 6 cents. North Carolina huckleberries, large blue, 10 to 12 cents, small black, 5 to 9 cents. Blackberries 6 to 12 cents. Maryland raspberries, per pint, red, 7 to 10 cents, and black caps, 7 to 8 cents. Florida muskmelons \$1 to \$1.75 a case, and watermelons \$15 to \$30 per hundred.

CONSUMPTION OF CANDY.

The United States is the greatest candy-making and candy-eating country in the world, and New York is the greatest candy city. During the year 1900, according to a census bulletin, more than \$18,000,000 worth of confectionery was produced in the factories of this city and State, and more than \$150,000,000 worth in the country at large.



OLD HORTICULTURAL HALL AND PARKER HOUSE.

Viewed from the front of the Old City Hall, with famous horse chestnut tree in foreground. Photograph made in 1859.

VIEWS OF OLD BOSTON.

The latter figure is greater than the combined values of the confectionery output of England, France and Germany.

In the State of New York so important has the industry of candy-making become that it now exceeds the value of all the iron and steel products of the State. Indeed, it is about equal to the entire candy product of the whole United States twenty years ago.

In 1880, according to the census returns for that year, the candy industry of the United States amounted to \$25,673,033, so about six times as much is now consumed by the average American as was considered a proper allowance by the last generation of candy eaters.

What will be the effect of so liberal eating of candy upon the American of the future? If baked beans and pumpkin pie are responsible for New England culture, will candy eating produce a race of philosophers or of warriors? It must have some result, if only dyspepsia. Even sedate business men, who a few years ago would have looked with fine scorn upon so effeminate an indulgence as the consumption of chocolate drops, now keep a box or two within convenient reach on their office desks, or buy a quarter of a pound to eat on their way down town.

Against the total of \$150,000,000 produced in this country in 1900, England manufactured about \$35,000,000 worth, or 100,000,000 pounds; France, 145,200,000 pounds, and Germany 120,000,000 pounds. England sends abroad more than half of the candy made there—"sweets," the Englishman calls them; while France and Germany consume most of their own product. In this respect they are like the United States, which also eats nearly all of its own candy.

Strangely enough, in this age of machinery, the bulk of the best candy is still made by hand, very much as it was ages ago. The "pulling" operation, by which pulled candy is yanked about and fashioned into a great variety of shapes and designs, was practiced in India in the very same manner three thousand years ago at the great religious fetes, when the sweet stuff was thrown over the branch of a tree and then worked by two men, identically in the same manner as in the most up-to-date candy shop of the present day.

But the Hindoos did not attempt the elaborate effects with their candy that modern manufacturers successfully practice. The decoration of dinner-tables with pretty and artistic designs in candy work is now a department by itself in the making of confectionery, and a very high standard

of skilled workmanship is called into use to produce original and tasty effects.

As with everything else not made by nature, candy, to be a perfect product, has certain rules for its manufacture which must be rigidly observed. These are equally applicable to the candy made at home. As a first precaution it is set down that candy should not be handled any more than is absolutely required or its transparency is lost. This transparency, or gloss, being pleasing to look upon, is a considerable desideratum, and it is a peculiar indication of the effect of climate on candy that in New York the gloss will remain for a month, while in London it lasts scarcely twenty-four hours.

In making bonbons, caramels, etc., the sugar and water must never be stirred after the sugar has dissolved. The sauceman must never be shaken or even moved while the syrup is boiling. As soon as the sugar begins to boil it is tried constantly in ice water. When the syrup forms a little mass in the cold water it is said to have been "boiled to the crack," and is removed from the fire.

The process of boiling is generally divided by confectioners into the following nine degrees; the small thread, the large thread, the little pearl, the blow, the feather, the ball, the crack and the caramel, all of which are produced by a heat ranging from 230 to 260 degrees. The ninth degree was first noted by Count Albufoage Caramel of Nismes, France, from whom the caramel was accordingly named.

The coloring of the candy is effected in a variety of ways. To color brown, melted chocolate or caramel is added. A yellow tinge is given by the addition of a few drops of tincture of saffron, while caramel mixed with carmine gives an orange yellow. Cochineal, carmine, saffron and Prussian blue are said to be perfectly harmless, yet so strong in coloring matter that a bit the size of a gumball will color five thousand pounds of candy.

There is a chemistry of confectionery—four confections as well as candy being included—which has to receive its due attention from the manufacturer. In flour confections milk is used as a moistener instead of water.

Next to milk, eggs are the most important moistening agents, while glycerine is also considerably used. When exposed to air glycerine increases in volume through absorption of moisture, and used in small quantities in cakes has the result of retarding the natural process of drying, keeping

the cake fresh and moist much longer than would otherwise be the case.

Confectioners employ a variety of aerating agents, principally ammonium-carbonate, commonly called ammonia. The chemical effect of this on the confectioner's paste is to change the sugar, which is present by fermentation, into alcohol and carbon-dioxide gas, which in its turn has the mechanical effect of distending and lightening the dough. It is only, however, when subjected to the heat of the oven that the gases in the dough are liberated so as to distend the mass and produce the required lightness. And even in the oven the ammonia evolves only half of its gas, and it has to be treated with tartaric acid to obtain its full effect.—N. Y. Sun.

"Did you get drunk voluntarily?" asked Judge Berry. "No," replied the defendant, "I got drunk gradually." In view of the difficulty of defining drunkenness, it would seem that perhaps the defendant's lawyer made a mistake in not making more of this nice distinction. A person patently intoxicated, it might be argued, often gradually finishes the process, not voluntarily, but in simple absent-mindedness.

Although not surprised that the Captain of Industry is so largely in evidence in graduation addresses, we still wonder if the absence of a specific model ever kept any inherently successful youth down; or if the presence of such a model ever helped any young man up who wouldn't have got there anyway.

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Literature.

Cyrus Townsend Brady has forsaken the sea for the historical novel. Instead of sailor stories we have a romance of the time of Frederick Barbarossa, emperor of Germany, in the middle of the twelfth century. Mr. Brady displays dramatic skill in the construction of his plot, and we are not therefore surprised that arrangements have been made for a dramatization of the story with James K. Hackett in the title role. We are indebted to this versatile author also for his omission of the archaic words and expression with which too many historical novels are burdened. As for the story, it is the ever-interesting tale of love and a throne. Barbarossa is in love with the Countess Matilda, who refuses, however, to marry the emperor as she is in love with young Hohenzollern. The latter is under the emperor's ban, but manages to trap Barbarossa in the castle of Matilda. Finding that Barbarossa, the prisoner, is likely to be taken by force, the rival for the throne, Hohenzollern, unanimously sets the emperor free and goes forward to fight his late prisoner's rival. Of course the outcome is eventually satisfactory to Hohenzollern and the fair countess, and the action is so rapid the story never becomes tedious. Mr. Brady is to be congratulated on finding such interesting material in a field from which many experienced writers are fleeing, that of historical fiction. (New York: The Century Company.)

A story of Corsican life and adventure with a historical setting is this story by Edward Pickering, and it is needless to say that there is ample adventure to sustain the interest of any boy to the end of the book. The hero, Camilla Negroni, after saving the life of his sworn enemy, casts his lot with three sworn banditti, who are forced to become outlaws because of the tyrannical rule of the Genoese. After several stirring adventures they join the patriots in what is known as the rebellion of 1735, at which time Camilla, who is narrating the story, forms a firm friendship with a young Englishman, whose ship sails away without him, thus resulting in his casting of his fortunes with the Corsicans. Besides the historical interest in the rebellion, following the success of which Baron Theodore Von Neuhof is proclaimed king, this friendship is admirably presented. The loyalty of the two boys to this "King for a Summer," the ups and downs of the latter's three months reign, and the fascinating picture of Corsican life will appeal strongly to the imaginative boy. Mr. Pickering presents the true and the brave side in his portraying of characters, and forces his readers to despise all that is mean and underhanded. (Boston: Lee & Shepard.)

One of the most interesting and excellent recent developments in book publishing is the tendency to fit out each season with its appropriate literature. For Christmas there are charming editions of classics designed especially for gifts; towards February the most valuable and solid of the new books make their appearance; with the first hint of spring, bird volumes fill the shop windows, and when summer days dawn, the long, lazy days of rest, recreation and amusement, we meet at every hand alluring romances, full of the sweet savor of pungent garden flowers and bubbling with that old yet new passion, whose familiar tale wearies not ever.

Particularly worthy of the attention of those who like a good summer novel is the list of recent romances published by the Macmillans. "The Conqueror" stands, of course, at the head of this list, though it is quite as much history as novel, and far more notable as literature than many more pretentious works. Not to have read this marvelously entertaining biographical treatment of Alexander Hamilton's life is to have in store a treat for the first cool day. Hamilton is in this book made alive to the reader, and the brilliancy, generosity and astuteness that won for him the close friendship of Washington, and the admiration of all who knew him, are shown to be very wonderful parts of a most wonderful whole. To have recreated a great man, as Mrs. Atherton has done in this novel, is to have written one's own title to greatness. Another charming summer book is "Dorothy Vernon of Haddon Hall," the second romance from the pen of the gifted author of "When Knighthood Was in Flower." Never has a novelist painted more sympathetically or in more vivid colors the growth in a pure girl of overwhelming passion for the man of her choice than Mr. Major in this book. There be, of course, those who call Dorothy Vernon unwomanly, but there are others, many of them, who pronounce her magnificently feminine, a reversion to the type of woman who herself chose her mate and gloried in the choice.

If "Dorothy Vernon" is a primitive woman, Owen Wister's "Virginian" is primitive man. But this time the novel's setting is in our own broad fields. The book does its material in the career of a young Virginian transplanted to the far West, a virile cowboy of exceptional gifts, who falls in love with Molly Stark's great-grandchild from Vermont, and diligently reads Scott and Shakespeare to qualify for marriage. In this work Mr. Wister has cleverly united in a single story several isolated chapters which have been multiplied by magazine readers, and the result is a book which is at once entertaining and instructive. For Owen Wister cannot fail to know these things when writing of the West, he so intimately knows and so ardently loves.

From "The Virginian" to "Oldfield," a Kentucky tale of the last century, is every sense except the geographical, a very long way. American literature, indeed, has nothing else quite like this in its history, which Nancy Hussey Banks has just given to the reading public. "Cranford" defines the book's atmosphere, but this is a Kentucky "Cranford," hence distinctly sui generis. The two parts of the book are as delicate in their relations to each other, as noble in their superiority to poverty, vulgarity and unsexiness, as were dear Miss Deborah and Mr. Matty, but they take a step beyond Miss Gaskell's old maid, in that they live and in a sweet child of the village, who help the troubled course of her true love to run smooth ere the story ends. "Oldfield" is a book to make one's ideals higher, one's soul braver, one's every-day life sweeter. That such a book makes its appearance just as many of us are enjoying our annual opportunity to get into touch with simple, cheery souls, who live sanely, unselfishly and contentedly in remote villages, is certainly a cause for great gladness.

"It is considered the smart thing," says a fashion note, "to own a hat or two that are not wet without detriment to its appearance." This is one of the few instances in which economical persons have long been ahead of the fashion.

Practical Poultry Points.

lost out in August. Money September than lost out on those hatched in April and May. It proved his faith in what he said by selling as many hatched in the fall as he could at broody hens to bring out. They rushed from the start, and from the start before Thanksgiving up to January most of them were marketed. He did not get to the chance of stolen nests for his hens were in yards. His house was of clean and well ventilated, and the size of a pen to allow the hen to be comfortable in them, free from lice or mites, and could keep them so, and the straw or corn meal was always clean and fresh at all times of the week. He did not talk about "broody hens." That was before many incubators were used.

Feeding of the young cockers not for breeding purposes, as soon as they were hatched, rough for a few days, and then as squab broilers of one pound each, or rough for chickens of five pound weight, dressed, is often an important part in deciding the question of profit on raised chickens. It may be that in some sections there is no demand, or but little for broilers, as people do not like to pay the high prices for such small birds. In the city or large town there is usually a demand for them. But if they are not wanted at that size it will pay to feed them till they can stand the roasting size. It is best to keep until they are to be separated from the pullets, as each will do better so than when allowed to run together.

Poultry and Game.

horticultural

New York. S. W. CHAMBERS.

Vegetables in Boston Market.
Vegetables in rather light supply both
from the South and West, and prices well main-

THE HAY TRADE.

The hay market seems weaker at many points, partly because of reports of prospects of a good crop coming on, though Virginia and North Carolina report a failure as a reason of drought. They, however, do not ship out much hay and would not buy much, so seriously affect the market. The

northern and western States report the crop doing well, especially those in which the alfalfa crop is an important one. The scarcity of prime timothy holds prices well up on highest grades, and helps to keep prices steady on the others which cannot be substituted for them.

Receipts at Boston have been liberal, but the demand holds good. Last week there were 508 cars, of which 241 were filled for export, and 30 cars of straw. Corresponding week last year 254 cars, of which 27 were filled for export, and 21 cars of straw. Large bales prime timothy fair at \$18 to \$18.50, and small bales at \$17 to \$17.50. No. 1 at \$17.50, and \$17.00 for large, and \$16 to \$17 for small. No 2 either sizes mixed \$12 to \$15, No. 3 small and clover mixed \$12 to \$13.

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DOMESTIC AND FOREIGN FRUITS.

Apples are in small supply, only 167 barrels of good stock, but trade is quiet. Preferred to choice Russets are \$4 to 55. Western Ben Davis \$4 to \$4.50, and No. 2 at \$2.50 to \$3. Southern strawberries growing scarce, but nearly more plenty, choice to fancy, 12 to 15 cents a box. Dighton 12 to 14 cents, Hudson River fancy 13 to 16 cents, Connecticut 10 to 12 cents and Jersey 10 to 11 cents. North Carolina blackberries 12 to 13 cents, blueberries 9 to 12 cents. Gooseberries, green, 6 to 7 cents. Florida peaches \$2 to \$3 a carrier. California cherries 75 to \$2 a case, as to quality. Pampas grapes in good supply. Florida sweet Canned fruit \$3.25 to 3. Key West Red Spanish \$2.50 to \$3 a case and Cuban \$2.25 to \$2.75. Pineapples \$2 to 8 cents each.

Toronto Industrial	Aug. Sept.
Vermont, Rutland	Sept. 9-11
Vermont, Concord	Aug.
Wisconsin, Milwaukee	Sept.

<p> Pork is firmer and higher: Short cut and heavy backs, \$22; long cut, \$23.75; medium \$22.50; ends, \$24.50; bean pork, \$19.00-20; fresh ribs, 1c; corned and fresh shoulders, 11c; smoked shoulders, 11c; hams, 11c; in palls, 12c-12 1/2c; hams, 13c; skinned hams, 14c; sausage, 11c; frankfort, sausages, 1c; boiled hams, 12c; ham, 14c; corn, 10c; Bologna, 10c; pressed ham, 12c; corn, 10c; rendered leaf lard, 12c; in palls, 13c-13 1/2c; pork tongues, \$23.50; loose salt, 13c; breakfasts, 13c; sausage meat, 10c, corn-dressed hogs, 9c. </p>	<p> Maine State Agricultural, Lewiston Sept. 1-15 Eastern Maine Fair Association, Bangor Aug. 16-29 Maine State Poultryological Association, Bangor Aug. 29-30 Durham Agricultural, Durham Aug. 29-30 Astoroot county, Houlton North Astoroot, Presque Isle Sept. 9-11 Southern Maine Mill, Madawaska, Madawaska Oct. 18 Cumberland County, Gorham Sept. 16-18 Northern Cumberland, Harrison Oct. 7-8 York County, York, N. Y. Cumberland Sept. 25-29 Gray Park Farm, Gray Corner Sept. 28-Oct. 2 Bridgton Farmers' Club, Bridgton New Gloucester and Danville, Upper Gloucester Sept. 24-25 Lake View Farm, East Sebago Sept. 24, 25 </p>
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MASSACHUSETTS PLOUGHMAN

It has taken a round half-dozen years to break the track record in the two and a half miles steep-chase, and society was out in force to see Mr. Lawson's Filon d'Or accomplish the feat.

Roses and strawberries go well together, and the annual exhibition of them at the new Horticultural Hall had the extra charm of occasional wafts of melody from the Pop concert.

It's a long jump from the furnace to the ice-wagon, but there is at least one ice man in the neighborhood of Boston who may hereafter be counted in on any movement against the smoke nuisance.

Now is the season when humanity arrays itself against the moth, possibly to the equal wonder of brown-tail, gypsy, and even the domestic enemy whose children are now invisibly happy in the joy of eating up our retired winter garments.

The terrible results of "culture," as Professor Triggs sees it acquired in the modern college, appear rather overstated to any one who is familiar with the modern college curriculum. The Professor looks at the situation through a pair of old-fashioned spectacles.

A contemporary tells an interesting story of a housewife who has solved the servant problem by presenting each new incumbent with a cake of soap and a toothbrush. The solution seems inexpensive; but it yet remains for some enterprising manufacturer to tell us what kind of soap and what make of toothbrush.

Every man, according to a Chicago judge, has a right to keep a mother-in-law in his house, even if a second wife objects to the retention of a first mother-in-law. The mania for collection being so humanly universal, we shall probably soon hear a bigamist defending himself with the plea that he was collecting mothers-in-law.

The Boers who are now laying down their arms are said to be bitter against France and Germany for prolonging the struggle by holding out false hopes. This state of mind is probably not altogether unwelcome to British statesmen; and who knows how valuable a cement it may prove for fastening this new addition to the British Empire.

Recent fatal fires point very distinctly to the necessity and future value of a new course that is to be given next year under the auspices of Technology, although not yet wholly affiliated. The new course will be devoted to preventing fires instead of putting them out, and is the first step toward making fire prevention an exact science.

Boston takes second rank in the assessed valuation of real and personal property in the United States, with \$1,200,000,000, being outranked by the Greater New York, with \$6,000,000,000. Philadelphia comes next, with \$1,000,000,000. St. Louis, Baltimore and San Francisco each have about \$400,000,000. Pittsburgh \$350,000,000. Buffalo and Cleveland \$250,000,000. Providence \$200,000,000. Washington \$150,000,000. All have a large amount of unassessed property in churches, public buildings, etc. If the greater Boston had been organized to take in a circuit of ten miles from the State House, we should take rank very nearly with New York.

Perhaps the transportation of cattle across the country from the ranch to the market marks the change in conditions in the country almost as much as any other thing. The Drovers' Journal estimates the number that will be moved from the south ranges this year at not less than 500,000, with a value of \$10,000,000. They come in patent stock cars at the rate of forty miles an hour, and are about three or four days on the road, being fed and watered as they travel. Twenty years ago they were driven over the road, taking as many months to arrive, and though they fed by the way were often poorer on reaching the market than when they left home. The average weight of those thus brought in was less than one thousand pounds per head at three or four years old. Now they average over thirteen hundred pounds at twenty to twenty-four months old, not having consumed but about half as much grain and forage as did the four-year-old. The beef steer is now the proverbial "nimble shilling," while then it was but the "slow shilling," long in getting around to a cash value.

Clover should not be cut when it is wet. Cut in the afternoon and allow it to lie in the sun until the dew is off it the next morning, then shake it out, and rake it the next afternoon before the dew lies again. Put it in good-sized heaps, and let it stand so for the next two nights and a day. Then shake it out that the sweat may dry out of it, and a few hours will be enough to fit it for the mow, as bright, as fragrant as when it was cut down, without the loss of a leaf or the blackening of a stalk. Never handling when wet by rain or dew, and curing by its own natural heat instead of sun drying it, are the secrets of having good clover hay, and to cut it early, or when but the first blossoms begin to turn brown, is another important item. We are glad to notice clover growing this year than we have seen for several years, not only where the seed was sown by the farmer, but where it is self-sown by the roadside and in hedge-rows. We remember a few years ago when we could not find enough clover heads to make a pot of clover-blossom tea for some one who wanted it as a medicine. This year we think we could gather a wheelbarrow load in going over the same route, or even a small part of it. We cannot account for the difference.

The Treasury Bureau of Statistics sends out a statement that the territory of Alaska, for which the United States paid \$7,200,000 to Russia in 1867, has supplied furs, fish and gold to the amount of \$150,000,000, about equally divided between the three items. Probably \$25,000,000 of the capital from the United States is invested there, besides that which is invested in transportation, and the annual shipments of merchandise to Alaska amount to more than \$12,000,000. The population has grown from an estimated thirty thousand at time of its purchase to 32,022 in 1890, 63,292 in 1900, and is now estimated at 75,000. These figures are largely estimates from the best sources of information, but a law recently enacted will enable the customs district to keep an exact record of shipments to and from Alaska, the Hawaiian Islands and Porto Rico, as they do with foreign countries. This will begin with the coming fiscal year.

On July 1. It is probable that the above estimates of the productions and trade of Alaska are rather less than more than stated. Yet we remember when Secretary Seward was bitterly denounced for buying that far-off, barren and ice-clad country.

While several unsuccessful attempts have been made to make the anniversary of Bunker Hill a legal holiday, the observance of the day is extending. While formerly the observance of the day was limited to Charlestown, and not too thoroughly observed there, it is now generally observed in Boston and in most of the cities and towns near by. This is as it should be. Not only was it a battle upon which many of the patriotic citizens looked as the real opening of armed and organized resistance to the British power, while that at Lexington and Concord was more of the resistance of a poorly organized mob, but there were few places near by which did not contribute a quota of men to the contest, and in which there are not those who desire to pay honor to their ancestors who strove to prevent the advance of the British troops. Nor are there many towns in the State where there are not some who could trace back to one who was behind the redoubts that day. New Hampshire troops also were there, and Connecticut can claim a share of the glory even if she had sent no other than Gen. Israel Putnam. We hope to see June 17 made a legal holiday, in this State at least, that we may do full honor to the memory of our patriotic ancestors.

Cabbage Culture.
Success in cabbage culture depends upon raising the right variety for market, and then upon making the crop a large one with firm, well-developed heads. Firm heads are necessary on account of shipment and keeping for winter markets. Poor soil will not develop firm heads, and as a result one must be within driving distance of market to secure any profits. Most of the Eastern winter markets will pay more for Danish seed than any other cabbages, and as the extra cost of seed is only a trifle no farmer is justified in not raising this kind for the markets demanding it. Western markets like the oval-headed varieties, and the two most satisfactory are the Hollander and Ne Plus Ultra, with a good early cabbage in All Head Early.

Cabbage raising should be conducted on a large scale to prove profitable, but not unless facilities are at hand for shipping big crops to remunerative markets. One must settle the question of markets first. If shipments can be made by boat instead of rail the chances for profit are greatly improved. The Southern market gardeners along the Atlantic coast have this advantage in their favor, and they are able to compete in the Northern cities with nearby growers, so that the latter confine their attention mostly to winter cabbages. Winter cabbages are profitable if one has the storage-room and facilities, for during seasons like the past winter prices have been so high for late cabbages that a big profit was paid those who held stock over. One may plant seed for selling young cabbages, or raise just enough for his own use. About ten pounds of seed should furnish half a million small plants, and that number can be raised on an acre of land. When transplanted they should plant between forty and fifty acres. A cabbage farm of that size is a pretty formidable affair to look after, but with proper system and workmen it can be handled with ease. The main thing is to see that good culture is given through the season, and a generous supply of water furnished in dry seasons. Irrigation for cabbages is a sure method of making the work profitable.

At Lambing Time.
The most common mistake made by sheep growers is to let their ewes become too thin at lambing time, and in some cases they fail to nourish the lambs sufficiently to make them grow rapidly from the start. It is essential that the ewes should be in excellent physical condition at the lambing time, and it will well fed up to the last they will perform their duty satisfactorily. When the ewes show signs of getting lean it is time to do something for them. Change their feed, increase it or change their quarters so that they may develop a better appetite. Sometimes narrow, unpleasant quarters have a good deal to do with the ewes' health. They appear to grow downcast and listless, and their appetite fails them. A change of surroundings will often in such cases completely change their natures.

Ewes which produce twins cannot raise them if they are not in fine physical condition. Many ewes which bear twins break down under the strain. They are not physically able to raise the two lambs, and consequently the lambs themselves never get the start in life which would make them profitable. It is a short-sighted policy either way to permit the health of the ewes to suffer. There should be liberal feeding fully a month before lambing. A feed of bran and corn kept up daily will generally make the ewes strong and healthy, and when the extra strain is put on their systems they will be able to endure it. Many sheep would be saved if this feeding were attended to in time. Sometimes it is not so easy to detect the actual condition of leanness of a sheep because of the wool which hides the body. It should be a matter of duty to examine the bearing sheep beforehand and test the condition of the body with the hands. If found thin and lean the animal should be fed to a proper degree of plumpness to insure perfect health and happiness. There is money saved in the end, too. A sheep that is fed up beforehand can raise the lamb on much less food than a thin ewe which must be nurtured back to health and strength.

Ruling on Oleomargarine.
Commissioner Yerkes, of the Internal Revenue Bureau, has settled the contested question as to whether butter or any other ingredient, artificially colored, may be used in the manufacture of oleomargarine without increasing the tax from one-quarter of a cent to 10 cents a pound, by issuing a regulation which holds in effect that no artificial coloring matter whatever can be used in any way in the manufacture of oleomargarine without increasing the tax as stated. The regulation is as follows:
If in the production of oleomargarine the mixtures or compounds set out in the law of 1886 are used, and these compounds are all free from artificial coloration, and no artificial coloring matter is produced by the addition of coloring matter as an independent and separate ingredient, a tax of one-fourth of one cent per pound only will be collected, although the finished product may look like butter of some shade of yellow. For example, if butter that has been artificially colored is

used as a component part of the finished product oleomargarine (and that finished product looks like butter of any shade of yellow), as the oleomargarine is not free from artificial coloration, the tax of 10 cents a pound will be assessed and collected. But if butter absolutely free from artificial coloration, or cottonseed oil free from artificial coloration, or any other of the mixtures or compounds legally used in the manufacture of the finished product oleomargarine, has naturally a shade of yellow in no way produced by artificial coloration, and through the use of one or more of these unartificially colored legal component parts of oleomargarine the finished product should look like butter of any shade of yellow, this product will be subject to a tax of only one-fourth of one cent a pound, as it is absolutely free from artificial coloration that has caused it to look like butter of any shade of yellow.

American Control of England's Food Supply.

ENGLAND COULD NOT FIGHT US AND LIVE. In the North American Review for June, J. D. Whelpley draws some interesting conclusions from American agricultural predominance, which we abstract as follows: Mr. Carnegie's recent opinion that no nation could long wage war against the United States, through the latter's control of food supplies, is absolutely true as applied to England. The first effect in such case would be an enormous rise in prices throughout Europe, while England would be threatened with dire famine.

WE FURNISH FORTY PER CENT.
Of England's annual imports of over \$2,000,000,000, nearly forty per cent., or about \$800,000,000, is food, animal products amounting to \$600,000,000 and vegetable products to \$200,000,000. Of these food imports, the United States furnishes \$540,000,000, or sixty per cent.
The British citizen ten years ago consumed 120 pounds of meat a year, now he consumes 132 pounds; ten years ago he produced eighty-one pounds, now he produces but seventy-eight pounds. The dependence on foreigners is thus largely increased.
Ten years ago, also, the British citizen consumed 362 pounds of wheat, now 338 pounds; he produced ten years ago 89 pounds, now but 77 pounds, a relatively greater decline than in consumption.

The British citizen dwells largely on the product of the home soil, but the bulk of the cities live almost entirely on imported foodstuffs. Nearly one-fifth of the entire population is centered about London, and American bread and meat constitute the bulk of its food. It is there that shortage would be felt first and worst; there would spring up the panic and the bread riot.

NO AVENUE OF ESCAPE.
British statesmen have recognized these facts and there has been talk of great government granaries, but nothing has been done in this direction. England also has shut off the avenues of escape that might have been found in her colonies by not encouraging the development of colonial agriculture by preferential tariffs or similar means. It is too late now to try such policies. Australia sells England mutton, and Canada trails in with a part of her surplus; but the American meat packer and grain dealer have secured the great bulk of the trade, and have developed supply to keep pace with demand.

In some items in which great English communities are almost entirely dependent, the percentage furnished by the United States is almost sensational. The total percentage is reduced by many articles which do not cut much figure in the food of the masses. The Londoners do not care whether the butter comes from Denmark or the United States; but if the penny loaf should rise to sixpence, things would happen in London which have been hinted at in the past and dreaded for the future. The American people thus hold in leash the furies of famine, riot and disaster, waiting to spring at the throat of a country hopelessly weak at the base of supplies.
No other country could make good the deficiency. All western Europe is an immense debtor to the United States, and Russia is exhausted before it reaches England. The necessity of providing for the continent in an American embargo would not only send prices up, but would prevent England from securing even the small amount she now gets from that direction.

OUR STRENGTH IN NECESSITIES.
The following table shows the strength of the United States in the English markets in the principal items of animal food:

Articles.	British Imports.	Per cent. from U. S.
Cattle, live.....	485,645 head	71
Sheep, live.....	362,533 "	38
Beef, fresh.....	462,550 lbs.	70
Beef, salt.....	21,008,098 "	96
Beef, cured.....	56,019,246 "	92
Lamb.....	631,515,650 "	80
Hams.....	201,890,040 "	89
Lard.....	215,565,083 "	85
Pork, fresh.....	77,894,240 "	35
Pork, salt.....	27,857,536 "	52

All these percentages are greatly in excess of our 27 per cent. of the grand total. The articles in which we lag are mutton and dairy products. The weak points are shown as follows:

Articles.	British Imports.	Per cent. from U. S.
Mutton, fresh.....	379,999,000 lbs.	0.09
Mutton, cured.....	7,219,744 "	4
Tallow.....	24,054,744 "	26
Oleomargarine.....	10,008,144 "	2.07
Butter.....	37,000,000 "	2.56
Cheese.....	30,000,000 "	0.21
Milk, condensed.....	10,544,336 "	4
Lard, other.....	16,820,780 doz.	3
Eggs.....	16,820,780 doz.	3

Practically all the items in which the United States has a small percentage could be dispensed with without starving the people. Dairy products, for example, run into money much faster than meat products, and add largely to total values. The enormous amount of mutton furnished by Australia is the only feature of the vital supply not controlled by the United States. The principal grains imported are wheat, of which we furnish 47 per cent.; flour, of which we furnish 83 per cent.; and oatmeal, of which we furnish 85 per cent. All of these are much higher than the total of 53 per cent. Oats is a notable example, the United States furnishing but 28 per cent., the balance coming from Russia.

DECLINE OF BRITISH AGRICULTURE.
In thirty years Great Britain has decreased the amount of land under plow from eighteen million to fifteen million acres. The number of cattle has meanwhile slightly increased, although there has been a sharp decline of fifty thousand head in the visible supply during the past year. In sheep there has been a loss of 23 per cent.; Australia is crowding the home sheep industry to the wall. In no direction is any effort being made by England to increase food resources.
American cattlemen believe that the United Kingdom could largely increase the home supply of meat by converting pasture lands into great feeding grounds for young

and lean cattle from abroad. The government, however, makes this impossible by requiring that all imported cattle be slaughtered, for alleged sanitary reasons, within a few days after arrival.

Per capita exports of the United States are \$18.81, and imports \$10.38. Per capita exports of the United Kingdom are \$31.54, and imports \$38.03. A large proportion of the United States exports consists of bread and meat, while comparatively none is imported. A large part of the United Kingdom's imports is bread and meat, and comparatively none of the exports. In these facts lies the gist of the situation; England's exports could be refused without serious damage; our exports must find their way to the foreign consumer or the latter starves.

OTHER RAW-MATERIAL EXPORTS.
Apart from food imports, England buys annually nearly 1,800,000 pounds of raw cotton, of which 130,000,000 pounds comes from the United States. A stoppage of these shipments would close down the English mills, throwing thousands of operatives out of work. Leather, lumber, iron, steel, oil and a number of other important staples are also secured largely from the United States; and a cessation of such shipments would have immediate and disastrous effect upon many English industries. War against the United States, the English base of supplies, could result only in speedy capitulation or inevitable ruin.

Americans are apt to refer disparagingly to the United States as a raw-material producing country, and to note with pride the increasing percentage of manufactured goods in exports. It is evident, however, that our strong grasp upon the affairs of the world is due largely to these raw-material exports, and not so much to the manufactured goods. The latter enter into competition with the labor of countries whose entire energies are concentrated upon similar production, but which cannot produce enough food to keep their industrial population alive. To expand and strengthen in every way the productive power of American soil is manifestly our wisest national policy. Herein lies greater strategic strength than in formidable armies and navies.

American Breeds of Cattle.

George M. Rommel, expert in animal husbandry of the Bureau of Animal Industry, says in an Agricultural Department bulletin, just issued, that American breeders of cattle have equalled, if not excelled, the results reached on the other side of the water. "But," he adds, "no supremacy of excellence, no victory in show ring or market, can efface the memory of the debt America owes to those sturdy yeomen whose names are on the herd records of England and Scotland."
Mr. Rommel's pamphlet is devoted to a study of American breeds of beef cattle. He begins at the very beginning, going back to that voyage of Columbus, on which the first cattle known in the Western hemisphere are supposed to have been brought over. Other Spanish explorers and armed invaders followed Columbus's example, bringing not only cattle but horses as well. There was an abundance of grass and water, and as the Spaniards penetrated further into the interior of the country their herds in growing numbers followed them. From these sprang the native cattle of the West Indies and Mexico, the long-horned steers of Texas and the wild horses of the plains.

The next cattle immigration came with the Portuguese to Newfoundland and Nova Scotia. The French, too, introduced cattle into Acadia and New France.

These were carried into the far interior, and as far back as 1750 French missionaries in Illinois possessed considerable herds of cattle, horses and swine.

Virginia got her cattle from England soon after the settlement of Jamestown. They multiplied in the "old Dominion" very rapidly, one contributing cause being the fact that the law in those early days made the killing of cattle a crime punishable with death.

The Pilgrim Fathers began the cattle business with three heifers and a bull, brought over from England in the ship *Charity*, in 1621. New Hampshire got her first cattle from Denmark, New York from Holland, and Delaware from Sweden, at about the time the *Charity* landed the three heifers and the bull.

The first shipment to the Carolinas was from England, in 1670, while Georgia was the last of all the colonies to figure as a market for the English export trade in breeding cattle.

Thus it was that the United States got its first start in that cattle business which in the year of grace 1902 has made it possible to have all the present rumblings about the meat trust. The stock gathered from various parts of Europe were all so hopelessly inter-crossed in course of time that their identity was lost, with the result that our forefathers had what were known as the native cattle of the United States. Of this stock Mr. Rommel says:

"What the native stock was like we can best imagine from the stories of men now old, and from the scrub stock that is even yet the eyesore of many American pastures. Blood of Spanish, Swedish, French, Dutch and English, with, maybe, a dash of buffalo as they wandered westward, gave this stock a cosmopolitan character that was representative, perhaps, but hardly profitable. Lack of care by farmers, with no Bakewell to point the way to improvement, brought about a type of animal that a century has not been able to abolish."

In the years from 1760 to 1837 there was an awakening. That was the era of the fermenting stage of Anglo-Saxon cattle breeding.
It was in 1760 that Robert Bakewell began the operations which left so lasting an impress upon the cattle-breeding business. He was the first man to practice systematic inbreeding. Around his name those of all great improvers of live stock group themselves, and from the lessons he taught by example every breeder to this day learns the fundamentals of his craft.

He was a Leicestershire man, given little to talking, and not at all to writing about his methods. A great deal that he learned by careful experiment he kept to himself.
His aim was to secure cattle that would fatten on the smallest amount of food, and the great success of his art was revealed only by what he did and not by what he said anybody to do. This secret Mr. Rommel describes as inbreeding in the hands of a master, the surest way known to secure an improvement of stock.
"Out of the dark ages of ignorance and the scrub," says Mr. Rommel, "by leaps and by bounds, using what material he had at hand and moulding it to his will, the English farmer developed the modern breeds of cattle; producing tender meat where tough and leathery flesh had been before, paying the rent with his cattle and his sheep, and in time contributing very largely to the growth of agriculture in the new world."

The improvement in America began almost simultaneously with that in England. No sooner had the Revolutionary War closed than importations of improved stock began. This was kept up until the war of 1812 temporarily checked it.

Mr. Rommel says that the year 1817 will always be memorable in American cattle history. In that year, following the Short-horn importation of 1812, came the beginning of the Devon and Hereford importations, together with still another arrival of Short-horns.

Growth was slow up to 1827, when there came renewed activity, especially in Short-horns. Companies were formed and the improvement of cattle was marked. In point of numbers the Short-horn breed rapidly assumed the foremost position, until about the year 1880 was the only beef of prominence.

The expansion of the cattle business was rapid. Up to the opening of the Union Pacific Railroad it was mainly carried on in the part of the country east of the Missouri river.

Then came the discovery of the great opportunities offered by the far Western plains for grazing. The growth in the cattle-raising industry was then abnormal.

"In the early eighties," says Mr. Rommel, "pure-bred cattle by the thousands were brought from England to supplement the American herds in breeding bulls for the range, and the nearest that the Hereford and Angus breeds ever came to having a boom in this country was at that time."

"After the collapse, which was bound to follow, the cattle business is now on what is thought to be a substantial and healthy foundation. Quality is being bred into the range herds by the extending use of pure-bred sires, and this, with the better methods, is bringing the range steer to a high plane of excellence. Both on the range and on the small farm improvement has gone hand in hand with increase of numbers."

Orchard Management.

Bulletin 82 from the Hatched Experiment Station in April is devoted to Orchard Management, including Cover Crops and Pruning. Following our usual custom, we shall condense it to the space we can spare for it, trying to give the more important parts of it.

They put it down as an axiom, that "the more good fruit put into a market the greater will be the consumption, and the better the prices in the end." There are extensive orchards in this State, and there are some growing in uncultivated land, a part of which are vigorous, healthy, and of very desirable varieties, but the majority produce only cider apples. Of these the healthy ones should be saved, pruned, fertilized and sprayed. Those which have the trunks decayed and the tops in an unhealthy condition, it would be better to cut down; as they are breeders of insects and fungous diseases. Those that are of undesirable varieties, but healthy, may be grafted with profitable results. The process of grafting is easily learned and easily practiced. To have first-class fruit the trees should be made to grow vigorously, and the reader has a choice of the following fertilizers per tree: one to five pounds nitrate of soda, one to five pounds muriate of potash, two to ten pounds acid phosphate, or one to five pounds nitrate of soda, ten to twenty-five pounds good hard wood ashes, or five to twenty large forkfuls of stable manure applied in the fall or winter, and with the same amount of potash and phosphoric acid or of wood ashes as in previous formulas. The amount used should vary with the size and vigor of the trees, but should be enough to insure a good growth, six to twelve inches at the end of each branch in a year, if large fruit is expected.

Those orchards which have a rotation of turf and cultivation when the grass gets thin are the most numerous. The trouble with this is that many do not realize the amount of fertilizer needed to grow the grass or other crops and to keep the orchard in good condition, and the roots work so close to the surface under grass many of them are cut and broken when the land is cultivated.

Few orchards have been cultivated from the first, but experiments have shown the quickest returns and greatest profits from this practice. The moisture is preserved in periods of drought, and in wet times the air is left to the soil, the latent plant food is made available, the roots are kept deep in the soil, and are not liable to injury from heat or cold, and in well-drained soil there is no danger from excessively wet seasons.

With modern tools the cultivation can be cheaply and well done. Where long in turf plow not more than four inches in depth, then follow with the wider-spreading harrows. If the trees are too low headed to drive under, they can be made to reach well under the limbs toward the trunk of the trees, while the horses work in the open space. The acme or shears harrow, the spring-tooth harrow and the cutaway harrow, all are well adapted to this work, and the common weeder to follow them may save much labor in keeping the soil firm and mellow two inches in depth, by running the harrow once and the weeder two or three times.

The cover crop in the orchard in fall and winter is an important advantage in supplying nitrogen and organic matter or humus to the soil, lightening a heavy soil and making the light soil more retentive of moisture; protecting the roots from heavy freezing, and preventing the fine particles of soil and plant food from washing away in fall, winter and spring. Among the crops so used are rye, oats, peas, barley, soy bean, cow pea and hairy vetch, with the clover less frequently. The rye, red and crimson clover and hairy vetch have the advantage of being hardy, living through the winter, and making some growth in the spring before the trees start to grow. The others winter kill, but remain on the ground during the winter, preventing washing and loss of moisture in the spring by evaporation. The hardy crops may absorb too much moisture in the spring.

The cost per acre and amount of seed on each of these crops is given, 1½ bushels Canada peas, 1½ bushels barley, cost \$3.00. Ten pounds red and eight pounds of crimson clover, cost \$2.25. Hairy vetch, 1 bushel, cost \$7. Two bushels cow peas, cost \$4.80. Two bushels soy beans, cost \$3.70. Of these they say the peas and barley made a good growth, held snow well, and was a thorough protection against cold and washing. The clovers made a good catch, prevented washing, but did not hold the snow or protect from frost. There would be but little organic matter added to the soil unless they are allowed to make considerable growth in the spring. The vetch grew about eight inches high and was well matted, covered the ground well, but did not hold much snow. It starts early in the spring and should supply a good body of organic matter rich in nitrogen to turn under earlier than the clovers. The cow peas made but small growth, and should be sown very much earlier. The soy bean made a good growth, held the

snow nearly as well as peas and barley, but was not as much protection against frost. It may need several seasons to prove which of these two will prove the best cover crop. All the above were sown Aug. 10.

Upon pruning they give several illustrations of what they call proper and improper methods. The first is a tree pruned high enough for teams to work under the branches. The objection to this is that the pour of so much of the trunk and branches to the drying influence of the air, which checks circulation of the sap and growth of the tree.

The next shows trees planted too close, and the lower branches cut out as they become weak. This forces an upright growth instead of heading in the top and causing lateral growth so that they might be easily sprayed and thinned well, and the tree harvested. The next is a well-formed tree headed in with none of the lower branches removed. There have been large ones. Then two large trees, each twenty-five feet high.

Their rules for pruning are never to remove more wood than is necessary to keep the tree in view. Cut too little rather than too much. Cut all dead wood away as soon as discovered. The summer is a good time to do this, as it is easily seen. If two branches rub together, cut away the weaker, and one rests on another do the same. Cut back and thin out the tops rather than the lower limbs. Never remove side branches if it can be avoided. If it must be done cover all wounds over a half-inch with two coats of linseed-oil paint, gas tar or grafting wax. The winter is a good time to prune, as farmers are then at leisure, but if done early in winter one more care to protecting the injured parts, lest freezing and thawing should cause the dry in too far, and the longer this exposure the greater the injury. Remove branches that are too low or rest on the ground. Peach trees need to be thinned out in the top, removing the inside shoots as they grow too thick, that the foliage and fruit may have opportunity to develop.

Thinning the fruit is necessary in some seasons, as the trees set more than they can mature to large size, good color and fine quality. Remove all imperfect, wormy, gnarly, distorted, surplus and very small fruit as soon as its character can be determined. The average time for this is July 1, varying some from early to late varieties. On low-headed trees the expense is light, and an expenditure of twenty-five to fifty cents a tree may double the net profits.

The season of 1901 was unusually favorable to the growth of fungi on the fruit crops. Monilia, or brown rot, injured peach, plum and cherry. The black knot was abundant on plum trees, and the apple scab had not been so abundant on apple tree leaves and apples for many years, but where spraying was thoroughly done there was little injury to the fruit. As no one can predict what the season will be, the progressive grower should spray each year, so as to keep both insects and fungi under control.

In testing new fruits they found no new grapes better than Warden, Campbell, Green Mountain, Concord and Delaware for Massachusetts. Of blackberries, the Agawanna, Snyder, Taylor and Eldorado stood at the head, with Rathbun and Merseman decidedly promising. The raspberries that did the best were Cuthbert, King, Curt and London for a heavy soil. Currants stood as follows: Red Cross, Wilder, Fay's Cherry and Pomona.

Should Loma (2144) produce a foal by Bingen (2064) next season, the youngest pedigree will show the popular Wilkes-Electioneer-Nutwood combination of blood lines. This combination is found in perfection in the pedigree of G. W. Leavitt's magnificent young stallion, Todd. The latter gets a Director 2:17 cross, which adds greatly to its value, as back of that is the great brood mare Aloha, by A. W. Richmond, while a little farther back is some of the best of thoroughbred crosses. Forbes Farm, Milton, and Lookout Farm, South Natick, are probably as well equipped for producing animals that combine the Wilkes, Electioneer and Nutwood (2:18) as any that can be named.

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THE HIRED MAN

can do more work on a farm fenced with barbed wire than any other man.
Don't have to repair fences, or chase cows.
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EMBROIDERY.

How to Roll an Umbrella.

The Failures of Sterilization.

These conclusions, reached by the painstaking investigations of so well known an

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Food for Warm Weather.

"Salads are a pleasing addition to the dietary. Fruit, vegetable and nut salads are hygienic and popular. Fruit should be regarded as a necessary rather than as a luxury. From the standpoint of human economy it is always cheap to have fruit for breakfast, and during the warm spring and

Physique and Ability.

This explanation serves to make clear why the use of ear-spoons, pins or hairpins is un-

Domestic Hints.
BUTTERMILK GRIDDLE CAKES.

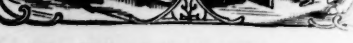
wire frame; the lace is shirred over this, giving a "summery" transparent air. Though simple, it is chic, and several have been ordered like it for coaching hats.

Lillian Whiting in Boston Budget.

velous potency. To achieve the s
lute peace and reconciliation wi
me will is to achieve poise and
to be thus cast into the will of

m to the weak,
 friendly hand to the friendless,
 words—so short to speak,
 whose echo may be endless—

Recognize This Picture.



The soap their mothers used to delight in praising. Dobbins' Electric is the same soap.

1, 1902. Copies of this number can be had by sending 25 cents to the Ploughman office.

RADWAY'S READY RELIEF

CURES THE WORST PAINS in from one to twenty minutes. Not one hour after reading this advertisement need any one SUFFER WITH PAIN.

ACHES AND PAINS.

For headache, whether sick or nervous, toothache, neuralgia, rheumatism, lumbago, pains and weakness in the back, spine or kidneys, pains around the liver, pleurisy, swelling of the joints and pains of all kinds the application of Radway's Ready Relief will afford immediate ease, and its continued use for a few days effect a permanent cure.

STOPS PAIN

It instantly stops the most excruciating pains, allays inflammation and cures congestions, whether of the lungs, stomach, bowels or other glands, or mucous membranes.

Sold by all druggists. Radway & Co., New York.

Poetry.

LOVE'S PROOF.

How can I prove my love to you,
You whom I love so well?
What can I say, what can I do,
All doubts henceforth to quell?

No vows I make, vows are too weak,
In them no proof would lie—
Some other method I must seek
My heart to satisfy.

Nor can I smile on you alone,
As through the world we go;
Some other method must be known
To those who love would show.

No dear, I'll simply take your hand;
My life to you I give;
As on we go, o'er rocks, through sand,
With me a sign or moan.

We'll happy be when smiles the sun,
And laugh when falls the rain;
Making each day the only one,
Filled with its joy or pain.

No promises for future years,
No memories of past;
No shedding of regretful tears,
No coming hopes forecast;

A present hope, a present joy,
My love must be to you;
A hoop of gold without alloy,
That makes us strong and true.

A circle, where each life complete,
Within its lines may dwell;
Invisible, and yet so sweet
Each knows and feels the spell.

More tangible this proof will be
Than word, or look, or deed;
A something that no man can see,
It satisfies our need.

—MISSIE MESSERVOULE.

A CASEMENT CANZONET.

I know a little window
In frame of ivy set,
A tiny cottage casement clasped
With emerald amulet;
And looking through this window
You see a garden old—
Petunia, dahlia, mullen, pink,
And rose and marigold.

But oh, this little window
With ivy curtains hung,
I would my sweetest singing might
In praise of it be sung!

For, looking through this window,
A world of joy is mine—
Dreams, visions, hopes and fantasies,
All golden, all divine.

—Clarence Urmey, in Lippincott's.

OLD FRIENDS.

Make new friends, but keep the old,
Those are silver, these are gold.
New-made friends, like new wine,
Age will mellow and refine.
Friendships that have stood the test,
Time and change, are surely best.
Brow may wrinkle, hair turn gray,
Friendship never grows decay;
For old friends, kind and true,
We once more our youth renew.

But, alas! old friends must die—
New friends must take their place;
New friends must be their place;
New friends must be their place.

—John Almer Dorgan.

A TOAST.

When bluebells ring their merry chime
Announcing June and summer time,
And dancing brooks their carols sing
Prophetic of the passing Spring—
We'll pluck a golden buttercup
And with the dew we'll fill it
And drink a health to happy hours—
To singing birds; to fragrant flowers.

—From Four-Track News for June.

TODAY.

Today
Unusually clear, new born;
Tomorrow is not this
The sun may cease to shine
For these are earth shall greet its morn.
Be earnest then in thought and deed,
Nor fear approaching night,
Calm comes with evening light,
And hope and peace. Thy duty heed—
—John Ruskin.

...That 'talk is cheap'.

Is often true,
But not the sort
Our lawyers do.
—Catholic Standard and Times.

PROTECTION

ANTISEPTIC SOAP
FOR CHAPPED HANDS.

Cures All Itching.
Softens the Skin.

At Druggists, or Sent Postpaid, 25c. WILLARD CHEM. CO., Boston.

Miscellaneous.

Love on Ice.

One winter afternoon after Dr. Arnold Schermer had come home from his desk in the Bureau of Finance, eaten his dinner, and stretched himself on the sofa to enjoy a cigar and a French novel, his young brother Hans burst into the room and said:

"Alma Holdesheim asked me to return this book with Adrienne's thanks."

"Why didn't you give it to me at once?"

"What was the hurry?"

"That is my affair. Now get out!"

Hans "got out" and banged the door. Arnold opened the book and found it was a copy of a piece of paper certain letters which he found marked by almost imperceptible pencil dots. The transcription read:

"I must see you to-morrow. Meet me at Haller's at five."

The Schermers were a family of officials. The father was a bureau chief, the oldest son, Gustav, a provincial governor in Dalmatia; Arnold was in the Ministry of Finance, and Hans was preparing for a government position. The only daughter had married an official.

Arnold was very ambitious. Social rank and consideration he had, what he wanted was money. It had never been too abundant with the Schermers, and Arnold fully realized its power. Hence he had resolved to marry it. As his friend Rudolf used to say, "It is possible to love a girl, even if she is rich."

He had the entire to the best families in Vienna, but if he should go to a rich man and demand his daughter's hand, it was doubtful whether his own prospects of official advancement would counterbalance the lack of present fortune. Clearly, then, the thing to do was to capture the heart of a rich girl, preferably a very young one, and so collect the aid of love in overcoming parental opposition.

His first budding sweetheart was carried off by a predestined cousin, the second was dazzled by a lieutenant's epaulettes. Then, on the ice—everybody skates in Vienna—he met Alma Holdesheim, and on his first visit to her house he met her sixteen-year-old daughter, Adrienne, and, her for his own. Pretty, modest, well-bred, and, most important of all, unsophisticated, and not yet "out," she seemed the very girl for him. In the Vienna equivalent of Bradstreet, old Holdesheim was thus labeled:

"Owens a large spinning mill, an estate in Bohemia, and a town house in Vienna. Estimated to be worth 600,000 gulden; income, 18,000."

This was satisfactory. There were three children, and Adrienne's dowry could be reckoned at 120,000 gulden. Arnold's wedding began on the ice. Hitherto Adrienne had skated only with girl friends, and a few of their young—very young—brothers, who "didn't count."

Dr. Schermer was the first real man who had paid her any attention. He handled her skillfully. As long as they were alone he treated her in a familiar, comradely manner, but in the presence of others he showed her the elaborate politeness due to a grown-up young lady, and both of these things pleased her.

And as he was handsome, witty and well-bred, it was no wonder that "little Adrienne" fell in love with him. During the summer his memory was kept green by the 178 souvenir post-cards which he sent her.

In the following winter she made her debut and Arnold met her everywhere. He made himself her shadow so that she once naively said: "If I go anywhere and you are not there I miss you so."

Adrienne's mother, not being blind, could not fail to notice Dr. Schermer's attentions, and their favorable reception by Adrienne.

"Pshaw! She is only a child," old Holdesheim replied to his wife's warning. "What if people do talk about it? Schermer is an honorable young fellow, and his father will be in the ministry some day."

The ensuing summer strengthened the bond between the lovers. Arnold had induced his father to spend the vacation in the vicinity of the Holdesheims. The young man might have done alone, but he was unwilling to attract the attention of Adrienne's parents too strongly until he had made sure of her love.

This certainly came in the course of the summer, and the first vows of love were exchanged: "The third day comes a frost, a killing frost," and the holders of these vows were not to be allowed to escape the device of borrowed books and marked letters.

But this was not the first frost. Early in the season Adrienne had discovered that Dr. Schermer was not the only young man who cared for her society, and social success made her coquettish. She meant no harm. Arnold, she thought, ought to recognize cheerfully her right to hold a little court, like other girls. But she was simply in quest of a well-dowered bride, and she was not in favor of an alliance with them. But she was too wise to warn Adrienne directly. Instead, she undertook to lead her into the details of the family resources and expenditures. Adrienne learned to her astonishment that her own fortune would amount to 150,000 gulden.

This seemed like an immense sum, but it amounted to nothing when she learned that it represented an annual income of only 6000 gulden, about a third of what she would require in order to live in the style to which she had been accustomed.

Clearly, then, her husband must have an income of at least 12,000 gulden. Then Mamma Holdesheim one day capped her argument by remarking innocently that Dr. Schermer's salary of 3000 gulden was a very high one for so young a man. Here was a sad discrepancy. "I shall have to economize," thought Adrienne.

At another time her mother said:

"Arnold must marry a rich girl. I wonder that he has not asked for your hand, as you and he seem to like each other. With your money he could do something for his family."

Adrienne had expected opposition, but she was not prepared for cold mathematical demonstration.

Shortly before this, Alfred Mortell, the son of a rich brewer, had come upon the scene. His reputation had not been encouraging, for the little rift within the lute had not yet appeared.

Now, Mortell was accustomed to receiving an unpleasant amount of attention and flattery from young ladies and their mamma, and he said to himself:

"Thank heaven! Here is one girl who does not care if I am rich and unmarried!"

This feeling inspired the hope of winning Adrienne by his personal merits, and he began to court her assiduously.

She was barely civil to him, but Arnold's jealousy was aroused, as has been said. After the lover's quarrel, Adrienne devoted more attention to Mortell, partly to punish Arnold, partly because she was not entirely free from vanity, and knew how many girls were envying her the conquest of the young millionaire.

Then came the suspicion that Arnold was in love with her money, and then came a ball at Mortell's luxurious house.

Last of all came her father with the news that Alfred Mortell had asked for her hand.

She begged for a week of deliberation, though her mind was made up. She wanted the love of the little Mortell, and she had given her. Hence the rendezvous at Haller's. There, after the waitress had brought the perfunctory tea and retired, Adrienne said:

"I have had news for you. You must promise to listen calmly until the end. Then you will understand and perhaps pity me."

Arnold obeyed, and she continued:

"At one time, you know, we were wealthy. Until a little while ago I supposed that we were still wealthy. I knew, indeed, that papa within the last year had paid large sums on my brother's account; but still I could not understand why, when we were alone together, he always seemed so anxious and troubled. But the other day he told me that my brother had squandered enormous sums, and not daring to confess to papa, had tried to cover his losses by speculating in stocks, the result of which was that he lost a deal more. In fact, as he had power to sign for the firm, he has gambled away not only all his own fortune, but most of papa's and ours."

"Papa has succeeded in obtaining a delay in the payment of the largest debts, he says."

"When Papa told me this, I tried to console him by saying that I, for one, did not care so much about money. Then he told me the whole truth. The debts amount to more than we can pay. Unless we receive assistance from some source, the firm will go into bankruptcy."

Adrienne paused, but Arnold said not a word. She had glanced at him once or twice to discover the effect of her communication, but she did not dare to look at him squarely for fear he would read the lie in her eyes.

"Such being the state of affairs," she continued, "I resolved, after thinking and worrying over it a good deal, to ask you to give me up. I cannot consent to chain your fate to mine, and, besides, I feel compelled to sacrifice my love for you to my love for my father."

"The shame of bankruptcy would kill him—I must save him from it. You know how."

"Bea?" said Arnold. He was surprised, but never dreamt of questioning the truth of her statement.

Adrienne shrugged her shoulders. "Bea, or banking, or railways. What is the difference? I am in the market for the highest bidder."

"But—him! But cannot I, perhaps, assist your father? It is true that I have nothing but my salary. Is that sum—I mean the sum necessary at once—so very large?"

"A good many thousands." There was a long pause. "I cannot give you up," Arnold said at last.

"But you must; I cannot let you sacrifice your self."

"But I love you, Adrienne!"

"As I do you, Arnold. But we must."

Another long silence. Then Adrienne said: "Decide. If you love me truly you will give me up and not tempt me from my duty. Do not make my heart heavier than it is!"

"If I receive a picture postcard from you on Sunday, I shall know that you agree with me. Goodbye!"

She sprang up and was gone before he could make any effort to detain her. Arnold sat looking at the untasted and melted ice.

Two years ago, "just the wall," he thought, "I really in love with the little thing. Confound it! But a bankrupt father-in-law? Never! After all, it might have been worse. Suppose it had come after our formal betrothal!"

—N. Y. Evening Post.

Youth's Department.

A RAINY DAY.

The robin sings his song for rain,
The tree too cries a glad refrain!

The grass blades quench their parching thirst
The small buds into blossoms burst!

Then why should little children say,
"Oh, dear, it's such a rainy day?"

—ARTHUR E. LOCKE.

THE MERRY RAINDROPS.

Hark! just hear the raindrops fall,
Pitter, pitter, 'gainst the wall,
Pitter, pitter in the shingles,
Don't they make a merry jangle?

Now they dash, now they splash,
On the gravel, on the grass,
Pitter, pitter, now they glide,
Pussing, rushing, slide by slide,

Flashing, splashing, to and fro,
Crossing, rushing, there they go!
Dashing against the window-pane,
Jolly, jolly drops of rain.

Dancing, tumbling, here they come,
Skipping, tripping—oh, what fun!
Now, with many a hop and bound,
See them scamper to the ground,

And the lively race is done,
Tell me, please, which raindrop won.

—M. Crosby Eastman.

Where the Ants Came From.

In the old Chinese fairy tales we find that the little children of China are told many curious things about animals, birds and insects. One of the most popular of these stories tells how the ants came upon this earth. And, when the small boys and girls of China watch the busy crowds of tiny creatures hurrying back and forth to and fro, they think of the old fairy tale, and find a strange delight in all that the curious little creatures do.

Now here is what old China teaches her children. "Once upon a time there was a man who was pretty lazy, and his wife found constant fault with him because he would not work, and so earn money to take care of her and their little boy. At last, tired of her cross words, which I think he deserved, he said he was going away where he could not hear her voice again."

"Off he went. But he did not stay long. He went away because he had grown so used to having his wife look out for him, and give him nice food and a cozy home, that he soon found it was easier to hear her fault-finding than work for his own living."

"He had a bit afraid of his wife, though, and so when one dark night he reached his home, he stayed outside for a while, and peeped in at the window to see whether she looked cross or if she was in a good humor."

"She and he were talking about the good things to eat which she had brought home from the market. The man heard every word, and his mouth began to water for a taste of the delicious food."

"So he timidly pushed open the door, and went into the room. His wife was not glad to see him, though, and her only words were: 'Well, lazy one, what brings you back? Have you made good while you were away?'"

"No," said the man. "But I have found out that I have the power to smell through cloths, boards or solid rock. And so I can make good for you by showing off this great gift."

"Pooh!" cried the wife. "This is fine talk. Show us what you can do."

"The man sniffed the air for a second, and then with a wise air said: 'Well, in the closet you have a tender young chicken. It is dressed with pork, but not yet cooked. You also have two kinds of fish, some bean curd, and at least two green vegetables.'

"The next day his wife told the story of her husband's great gift and wide, in the hope that it would reach the emperor's ears. To her joy that very night a messenger came to her little gate, saying that the emperor had lost his great jade seal, and that he would give her a reward if she would find it for him."

"The poor man, of course, was terribly frightened; for he thought the emperor would find him out, and that he would lose his life for his deceit. But his wife gave him no chance to say a word; she just rushed him to the great hall of the palace, crowded with nobles all waiting for him to solve the mystery, his heart sank with fear. He was led to a chair of gold, and seated in state; and then a great silence fell on all, while the emperor, with his eyes, and forgetting the sharp ears eagerly waiting for his least word, he groaned out:

"Ah! this is sharp sorrow. This is, indeed, dire distress." Now close behind him stood the emperor, who had stolen the great seal, and their names were "Sharp" and "Dire."

Of course, conscious of their guilt, they thought the man had discovered their crime, and so one pulled his sleeve, and said to him: 'Come, let us go, and if you promise not to betray us we will show you where the seal is.'

He rose at once, and taking an arm of each man, and followed by the emperor himself, in his rich robes of state, and all the court, he was led, sniffling the air as he went, straight to a deep well."

"Here," he said in a loud voice, "you will find the seal."

A man at once climbed down into the well, and to the emperor's joy came back bearing the lost seal.

And now what great gift, think you, this foolish man asked from the emperor? A bedspread of diamonds, candy, so that his wife, who was very fond of it, could nibble on it at night when she was awake. The emperor thought this a strange wish for so wise a man, but, of course, ordered one made at once. You can imagine the rage of the man's wife, however, when on his return home he presented her in place of gold and jewels with a bedspread of candy."

Now the emperor, when he heard of the strange way in which the seal had been found, said: 'I, too, will test the powers of this man. He may be able to find the seal at night when she is asleep. The emperor thought this a strange wish for so wise a man, but, of course, ordered one made at once. You can imagine the rage of the man's wife, however, when on his return home he presented her in place of gold and jewels with a bedspread of candy.'

So the lady took a small kitten, and, wrapping it up in raw cotton, she placed it in a closely sealed casket, and then had the man brought in to tell her what the casket held."

Long he gazed upon the casket, and, of course, had not the least idea of what it held. It might be any one of a million things and it might be empty. His life hung on a single guess. His first word would mean him glory, riches and honor, or sudden and horrible death."

At this thought his brain reeled with terror; and, thinking of his awful plight, he called out in despair, 'Ah, now, indeed, the bagged cat dies!'

Of course the emperor thought he was speaking of the little kitten, so he hastily opened the casket and tore off the cotton wrapping. There lay the little dead kitten, for it had smothered to death in the closely sealed casket."

Great was the uproar in the palace at this new proof of the man's power! He is a god," shouted the people. "His place is with the gods on high! He is too great to live on this earth!"

So they took the poor man out in the palace courtyard, and placing him on a silken blanket, they tossed him high in the air. Each time he came down he would stand again, and at last they let him fall from a great height down on the earth itself."

So high had they tossed him that when he struck the ground he was dashed into tiny atoms, and the wind blew the fine bits into the whole earth."

Then a wonderful thing happened. All this fine dust was changed into little ants, and all these tiny creatures really had the fine sense of smell that the man made believe he had. You know, you must have seen a small ant on a long distance. You have seen them come from the earth outside where their homes are, all the way through a house, to find a jar of sugar that is on a distant shelf."

And this is the Chinese way of accounting for their keen sense of smell—Jean S. Remy, in The Christian Register.

Popular Science.

A lately completed list of fungi gives the total now known as 52,157, not less than 433 species and varieties having been added since August, 1899.

Our sense of smell is explained by Crookes as due to "electrons," or chips of atoms, which are given off by radium, and which affect the nerves as well as the olfactory nerves. Smell is nearly lost in civilized man. A French writer suggests that our sensitiveness to odors will be increased by some instrument analogous to the fourteenth, and then a new era will open.

The whole operation of walking lasts about four-tenths of a second. The downward movement of the eyelid occupies from seventy-five to ninety-thousandths of a second. At the end of the descent a lid rests for a period which varied with the speed of the eye. In the case of the hundredth, and the ascending movement took seventeen hundredths. "As quick as winking," therefore, means about four-tenths of a second.

The new sewage disposal scheme of a German chemist, Erich Springhorn, is the conversion of the solid matter into blocks for fuel. This fuel is reported to be smokeless and to burn without disagreeable odor, and the cost of the process would be covered by the sale of the blocks at a moderate price for burning in stoves and furnaces. The solid matter is thoroughly sterilized that the liquid portion can be safely discharged into any river.

The electric arc between iron poles, which has been the peculiarity of a crater, but slightly modified, is proven by A. Brown and A. Chaitin to be specially adapted for medical use, on account of the great intensity of the actinic rays as compared with the heat rays. This makes it possible to bring the diseased part within four inches of an arc of two amperes and thirty-five volts. In nine cases of lupus an exposure of fifteen minutes produced marked effect, and twenty-four hours afterward the lupus nodules were much changed, while the healthy skin was unaffected.

The biological statistics of the New England coast have solved the problem of artificial lobster culture. Several thousand of the young fry are put into a cylindrical scrim bag about three feet in diameter and four feet deep, and the water in the bag is constantly agitated by a dasher driven by a gasoline engine. This prevents the fry from smothering or devouring one another, at the same time keeping their food of soft clam fragments within reach. In nine to sixteen days from the eggs the creatures are able to take care of themselves, this stage being reached by sixteen to more than forty per cent. of the fry, although no previous experiment had one per cent. of survivors. The fish hatcheries can now save the lobster industry.

Burns from Roentgen rays, now recognized as a real effect, have some curious features. Dr. E. A. Codman, citing nearly two hundred cases, notes that the burns resemble sunburn, but that they may extend much deeper, the body being transparent to these rays. The burns do not usually appear immediately, most often developing in about ten days, though sometimes delayed for months. Some persons are very susceptible, others are not affected in any way. The burns are usually of the superficial type, grounded sheet of aluminum, or by keeping the time within safe limits, and it is concluded that an exposure of five minutes at a distance of ten inches—or twenty minutes at twenty inches—can do no harm. Not less singular is the apparent cumulative action, a number of successive safe exposures of the same surface seeming to be as dangerous as a single long exposure.

Historical.

In 1771 Hutchinson became Governor of Massachusetts.

In 1774 Parliament passed the Boston Port Bill, closing the harbor.

In 1770 an act repealing all duties except on tea was made, and the Boston Massacre took place.

In 1776 Braddock was appointed commander-in-chief of the colonial forces, and Washington was made aide-de-camp.

In 1764 notice was given in the English Parliament, that at the next session a stamp act for America would be introduced. In 1765 the royal assent was given to the Stamp Act.

Roger Williams was a man of pure and noble soul. He did not seem to bear any grudge against the people of Massachusetts. For when, in 1637, the Pequots tried to get the Narragansett Indians to join them in attacking the whites, and especially against those living in Massachusetts, he did all he could to frustrate their plans. At this time he set out in his canoe a stormy day to visit Canonicus, the chief of the Narragansett, and succeeded, at the risk of his life, in preventing the union of the two tribes against the whites. He died in 1633, at the age of eighty-four years. Although his judgment was not always wise, his motives were upright. In his struggle with the Puritans he was ahead of his age, which was not yet ready for such advanced ideas of religious toleration.

Curious Facts.

A Lynn firm recently made a shoe in thirteen minutes.

The oldest general in the French Army has died at the age of ninety-five.

Of the thirty-eight Sultans who have ruled the Ottoman Empire since the conquest of Constantinople, only one was a woman.

stantinople by the Turks, thirty-four have died violent deaths.

It is said that a full-grown bee can draw twenty times its own weight. It can fly about five miles an hour, and it will seek its food at a distance of four miles.

Scott is said to have written "Waverley" in less than six weeks. He wrote very rapidly, seldom revised, and as a consequence his novels are full of blunders, inaccuracies and anachronisms.

Burns committed his poems to memory as he composed them, and when he sat down to write he had before him no labor of composition, but only the task of writing down what he had already finished.

Milan has a curiosity in a clock which is made entirely of bread. The maker is a native of India and has devoted three years of his life to the construction of this curiosity. The clock is of good size and goes well.

The Horse.

Zephyr.

We present a portrait this week of the four-year-old mare Zephyr, by Zombro (2.11); dam, Gazelle (2.11), by Gossiper (2.14). This mare is much in the public eye just now, by virtue of her splendid performance at Memphis, on the second of May, where she trotted the second mile of a mile race in 2.12. She has no record, but has been extensively entered in stakes this season.

Just now Zephyr looks like the best trotting prospect in sight, but it is rather early to predict what any horse will do. There are others undoubtedly, some of which may be as good as she, possibly better, but none of them has thus far shown equally well. Her mile at Memphis was certainly a wonderful performance, time and season considered, and it is said that she was not strung to her limit. She is a California-bred mare, and was a very fast three-year-old. E. J. Tranter of Buffalo bought her last year for J. C. McKinney, owner of Terrace Farm, Titusville, Pa., and he paid \$5000 for her. It is said that since her Memphis performance Mr. McKinney has refused an offer of \$20,000 for her.

Zephyr is bred for speed of a high order. Zombro, her sire, made a three-year-old record of 2.13, which he afterwards reduced to 2.11 as a five-year-old, and he is by McKinney (2.11). Her dam, Gazelle, was a precocious trotter, taking a two-year-old record of 2.24, which she reduced to 2.16 as a three-year-old, and her present record of 2.11 was made as a five-year-old. Gazelle is by Gossiper (2.14), son of Simmons (2.28), one of the most successful producing sons of George Wilkes (2.22). Gossiper is out of Lady Bryan, by Smuggler (2.15), and his granddam was Mary B., by Snake, son of Mambrino Patchen 58. Beside Gazelle, Gossiper is the sire also of Miss Jessie (2.13), Ketchum (2.16) and three others, and the dams of Zulech (2.10) and Linette (2.17).

Gazelle's dam, Gipsy, is the dam also of Ed Winslow (2.19) and the granddam of Zulech (2.10). She is by Gen. Booth (2.30), a son of George M. Patchen (2.30). Gazelle's granddam was Echo Bell (grandson of Conn 2.15), by Echo 462. The latter is registered in Vol. IV of the American Trotting Register, and was sired by Hambleton 10. His dam is Fanny Felter, by Magnolia 38, granddam by Webster's Kentucky Whip, and his great-granddam by Shakespeare, a son of Duroc. Echo is the sire of sixteen in the list, his fastest being Tiptoe (2.16) and Deputy (2.19). His sons have sired twenty-two and his daughters have produced twenty-six, among them the grand race horse Direct (2.05), Loupe (2.04), Baywood (2.10), Flowing Tide (2.14), etc.

Zombro is a son of McKinney (2.11), and out of Whisper, by Almont Lightning 1023; granddam, Mary Berry, by Kentucky Clay 194; great-granddam by Edwin Forrest 49. McKinney is a son of Alyone (2.27) and the great brood mare Rosa Sprague, by Gov. Sprague (2.20). He is one of the most distinguished of living sires, having forty in the list, and more than thirty per cent. of these are in the 2.15 list. He is the sire of Coney (2.02), Jennie Mc (2.09), Hazel Kinney (2.04), Doc Book (2.10), Zombro (2.11), Charley Mc (2.11), Yon Bet (2.11), etc.

From this analysis of her blood lines it is easy to see that Zephyr comes naturally by her remarkable speed.

Oakhurst Farm Horses.

C. W. Lasell, proprietor of Oakhurst Farm, Whitinsville, Mass., shipped six of his horses to Readville on June 18. They are Ale (2.13), Gene D. (2.15), Mary C. (2.21), Melton (3) (2.23), Dick Berry, brother to Charlie Downing (2.11), by Anderson Wilkes (2.22), out of Ida Downing, by Stoner Boy, all trotters, and the pacer Terrill S. (2.10).

Abe Johnson, the Brockton trainer, has had eight head of Mr. Lasell's horses since about the first of May, made up of Miss McDonald (2.17), Easter (2.21), Awake (2.21), Professor Shaler (3) (2.27), Gungant (2.14), Estill Boy (3), by Potent; dam, Lattia (dam of Silver Spark, 3, 2.24), by Wilkes Boy; Jim P., brown gelding, foaled 1897, by Patchen Wilkes; dam, Annie P., by King Rene, and Baron Jay, brown gelding, foaled 1907, by Bonnie S. (2.29), out of Belle Baron, by Baron Wilkes (2.18). Two or three of the horses in Johnson's string will be started at Saugus this week.

Both Rubinstein (2.05) and Director W., the brother of Evangeline (2.11), being by Director (2.17), out of Fannie H., by Red Wilkes, have done a good business in the stud. They have been bred to a number of outside mares and several more have been booked. Director W. has filled out wonderfully the past year, and he is a big, lusty stallion now.

J. H. Collingwood of Hills Grove, R. I., recently booked three mares to Director W. Unless we are much mistaken Director W. will be a successful sire. He is bred right for it, he is an excellent individual, and although he has only a few living foals they are good lookers. Mr. Lasell has a yearling by him that is an unusually good looking, and promising speed.

The Rubinstein youngsters are coming along nicely. The mare Gony (2.13), owned by J. Bouvier, is at the farm, and has a very nice foal at foot by Rubinstein.

Mr. Lasell has had a bit of hard luck with his breeding ventures this spring. He lost one of the most promising of his brood mares. This was the mare Jimmie Cassell (2.16) (dam of Amazon, 2.25, and Ashland Cassell, three-year-old trot 2.15). He has a nice chestnut filly foal out of her by Rubinstein.

The Nun (2.24), first prize winner at the Grafton Horse Show, and sired by Young Jim, has a bay colt by Director W.

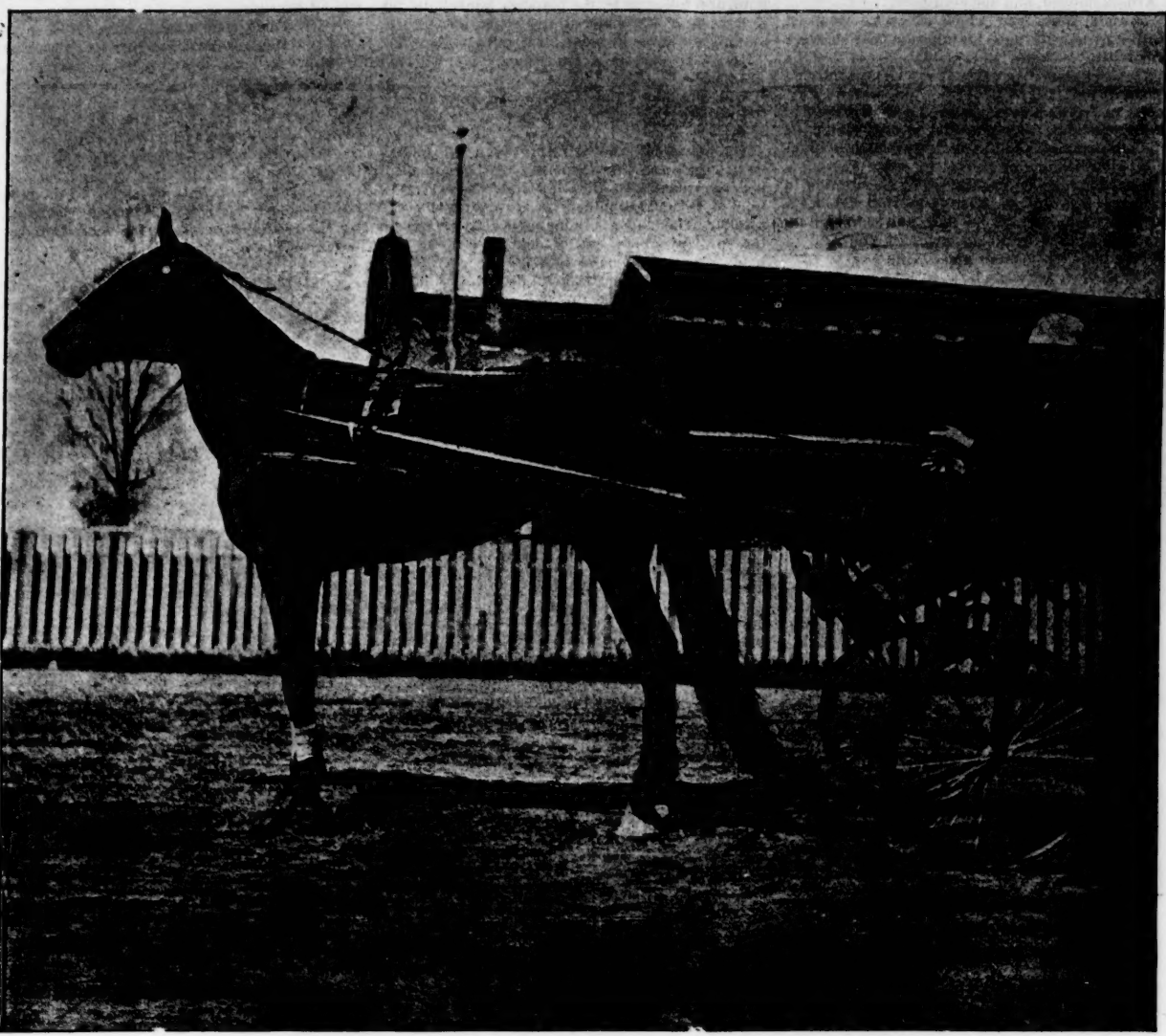
Golita (2.27), by Guy Wilkes (2.15), out of the great brood mare Cora, has lost her foal by Rubinstein, but Lessa (2.29), by Clay (2.25), out of Rachel Wilkes, by Young Jim, has a nice bay colt by Baron Wilkes.

Allertine (2.14), by Allerton (2.04), dam, King (2.24), dam of four in the list, by Miss Rene, is expected to foal soon by Rubinstein.

Malapero, by Red Wilkes, out of the great brood mare Magnet (2.34), by Strathmore, is in foal to Rubinstein, and Mr. Lasell expects a foal soon from Corysander (2.19), by Conductor, and who is in foal to Early Reaper (2.09).

The two-year-olds after they were worked a little this spring were turned out to pasture.

Rubinstein will soon, to our certain knowledge, have another performer to his credit, as the writer saw a five-year-old by him, a chestnut mare, which Mr. Lasell bought this spring at the Lackey sale, pace a mile over the farm half-mile track in 2.24, and she did it nicely. The third heat of a workout she paced a half in 1.07. She is a strong, rugged-looking mare, gaited some-



ZEPHYR, BY ZOMBRO, 2.11; DAM, GAZELLE, 2.11-1.2, BY GOSSIPER, 2.14 3-4.

what like her sire, and has a great amount of speed. It would not be surprising if she got a record of 2.15 or better this year.

Readville Notes.

The track at Readville was full of horses early Tuesday morning. The morning was beautiful except it was a little cool, and several of the trainers were keying up their horses for next week's meeting. No extremely fast miles were stepped, however; very few were faster than 2.20. Most of the stables will have starters at next week's meeting. Messrs. Forbes, Thayer, Lassell, Van Dyke, Leavitt, McDonald and others have made entries.

Susie J.'s mile in 2.14 still stands as the track record for the season. Titer gave her five miles Tuesday morning, preparatory to a race next week in the 2.10 trot. He has worked improvidence a mile in 2.16. Admiral Dewey's fastest mile this season so far is 2.35. Peter the Great has been a mile in 2.38. Improvidence will also be a starter from the Forbes Farm stables next week.

The fastest mile that Jimmy Carpenter has ridden behind any of the horses in the Leavitt stable is 2.19, on Tuesday, with Dolly Bidwell (2.09). She is named to start in the 2.10 trot next week. The three-year-old colt Todd has not been worked faster than 2.45.

The young things from Allen Farm in John Young's stable have set the rail birds twittering. They are all enthusiastic over the three-year-old Kyrie. Young isn't given to talking much, but he says that he likes them, which means much.

Lon McDonald has sixteen head in his stable. He arrived at the track last week. He drove Chain Shot (2.04) a mile the other day in 2.14, which is the fastest mile that he has ridden this year. He says that Chain Shot is in better form than he was at this corresponding time last season, and he will be greatly disappointed if he does not get some of the money in his class. Chain Shot may make his first start at Readville in any event if he does not start there. McDonald will strike into the big circuit at Buffalo. Miss Whitney is looking lively, and she never was working better. McDonald looks for her to lower her record.

Hammond (2.21), Carl Wilkes (2.14), Jessie S. (2.15), Cartridge (2.15), are among the fastest members of the stable. The beauty of them all though is the two-year-old filly Miss Todd, by Peter the Great, out of Fanella (2.24) by Arion (2.07). She is about as shapely a young miss as was ever seen in horseflesh, especially of the trotting breed. She is clean limbed and sound as a newly milled dollar, not a pimple on her round and plump and carrying considerable flesh. Before leaving Port Henry McDonald worked her an easy mile around 2.30, the last half of it in 1.11, last quarter in 34 seconds, and the final eighth better than 17 seconds. He won't start her before fall if he starts her at all this year. He thinks of turning her out and letting her have a run to grass for some time, when she may take her up and prepare her for a couple of engagements in the fall, one at Lexington, and the other at Memphis.

Henry Knapp has worked Frank Bogash (2.03) a mile in 2.17, and has been a mile in 2.23 with Hylle Bird (2.15). A. B. Comings, Reading, Pa., is at the track with March Gale (2.11), Vendome (2.21) and four green horses.

Dan Kane's stable is made up of three green horses. He recently arrived at the track from Baltimore. He has Myra, a black mare by Empire Wilkes, dam by Stranger; Heloise, a black pacer mare by Empire Wilkes, dam by Governor Sprague; and Oakland Pilot, a brown gelding by Oakland Baron, dam, Ella Medium, by Pilot Medium. He will have a couple of starters in next week's races.

The Maplehurst Farm horses, in charge of Allie Trout, and seven in number, are looking and working well. None of them has been split open. A two-year-old filly by Baron Wilkes, out of Daisy Miller (2.20), dam of Moll Miller (2.07) is one of Trout's favorites.

John Payne bitted his three-year-old Baron Wilkes colt to sulky for the first time on Tuesday, and stepped him an easy mile in 2.28. Ed. Bither has about fifteen head of horses in his string. He has not ridden any fast miles as yet. He thinks very highly of a seven-year-old bay gelding by Nelson's Wilkes. The gelding has not had very much work, but it is easy for him to beat 33 seconds for a quarter.

The chestnut gelding Upton, by Caneland Wilkes, is working nicely for Jack Wall. This gelding has got a world of speed, but he gets away slowly, and Wall is teaching him to hit his speed from the word. He has ridden a mile in 2.30 behind a three-year-old Federal colt.

A good list of entries has been received for the meeting next week, and good contents are promised. All the classes except the 2.08 pace filled well. This class had only one entry, and was declared off.

Sport at Combination Park.

June 17 was a gala day at Combination Park. The attendance was very large both afternoon and evening. All of the sports were excellent, and the racing particularly interesting.

SUMMARIES.

Combination Park, Medford, Mass., June 17, 1902—3.00 class, half-mile, every heat a race.

Miss Dixie, b m (Holmes) 1 1 1
Tommy's card, b m (Woods) 2 3 3
Wee Wee, br m (Hadley) 3 4 4
Brazilian Jr., b k (Hall) 4 5 5
Folly, rn m (Bailley) 5 6 6
Time, 1.13, 1.14, 1.15.

Same day—2.17 class, trot or pace. Mile heats, 3 in 5.

Morley King, b k (Lockwood) 4 1 1
Draunier Girl, br m (Kearney) 1 4 4
Deacon, b k (Bailley) 3 2 2
Taylor, br g (Bagley) 2 6 6

Jim Mace, b g (Baker) 5 3 4
Amber Spinks (Shannon) 6 5 6
Time, 2.25, 2.21, 2.22, 2.21.

Same day—Running race, five-eighths mile, two in three.

Margot, b k m (Roomey) 4 1
Red Spider, b g (McNamee) 1 4
Majorie, br m (Twahie) 2 4
Diva, br m (McArthur) 3 3
Time, 1.05, 1.05.

Same day—Special class, trot or pace, Half mile, every heat a race.

Milton, b g (Perkins) 5 1 1
Harry G., b k (Newman) 1 2 5
Dreusella, b m (Herry) 1 7 2
Toto E., b k m (Biddle) 3 3 3
Mose Sinclair, ch g (Lockwood) 4 5 6
Thornberg, b g (Baker) 6 4 4
May Audobon, br m (Gray) 4 7 7
Don R., rn g (Timothy) 9 8 8
Dr. T., gr g (Holmes) 7 8 8
Time, 1.15, 1.15, 1.13.

Same day—Free-for-all trot or pace; half mile, every heat a race.

Emma C., rn m (Curtis) 4 1 1
Lizzie V., ch m (Berry) 0 0 0
Nelson, b g (Corbett) 3 3 2
Time, 1.07, 1.08, 1.08.

The dancing and vaudeville were enjoyed greatly by those interested in those sports. Manager Hicks employs the best of talent for the vaudeville, and the performances are very high class. The dance hall is as orderly and well-conducted as the best of private genteel dancing parties. There is racing, dancing and vaudeville entertainments every evening in the week, Sundays excepted, unless prevented by rain.

Manager Hicks has arranged an especially attractive programme for July 4. These entertainments close on the evening of July 5. After that, the park will be let to societies, associations and parties who may wish to give entertainments there.

Hartford (Ct.) News.

The opening matinee of the driving club which took place the twentieth, was very encouraging to the club boys, both as regards racing and attendance, and if kept up no doubt there will be lots of fun. The matinee was preceded by a parade through the main streets headed by a band. Over fifty teams of fine horses and wagons composed the line, and should surely show that the automobile is not doing so much harm as they might. The rig that caused the most comment was W. H. Gocher's old Guy (2.10), driven by O. H. Burnham to high-wheeled sulky.

The racing opened with the 2.45 class, half-mile heats, best two in three. There were four starters, and John Kingroose landed Belles Stannal a winner from E. G. Babcock's Lady Walkill. In the 2.32 class were also four starters, and some lively racing was the rule. Mr. Swain's Frank R. W. got the first heat, in 1.20, after which E. G. Babcock landed Ridgewood a winner for the remaining two heats.

The free-for-all was the surprise of the day, as no one thought that the other entries would stand any show against Dr. Griswold's Quicksilver. The three horses, Elyria, Quicksilver and Mocking Bird, got a good sendoff, and it was a contest from the start, Elyria winning by half a length in 1.10. Quicksilver finished first in the second heat, but was set back for running.

SUMMARIES.

Hartford, Ct., June 20, 1902—2.45 class, half-mile heats, two in three.

Belle Stannal, b m (John Kingroose) 1 1
Lady Walkill, b k m (E. G. Babcock) 2 2
Melba, b m (E. A. Bailey) 3 3
Kitty Lalish, ch m (Dr. M. J. Black) 4 4
Carrie Knot, b m (H. Brule) 5 5
Time, 1.20, 1.20, 1.19.

Same day—2.32 class, half-mile heats, two in three.

Ridgewood, b g (E. G. Babcock) 3 1
Frank R. W. b g (W. M. Swain) 1 3
Lenny, b m (A. L. Bailey) 2 2
Amade, b m (A. L. Hills) 4 3
Time, 1.20, 1.19, 1.15.

Free-for-all, half-mile heats, 2 in 3.

Elyria, b m (T. W. McNamara) 1 1
Quicksilver, gr g (Dr. Griswold) 3 3
Mocking Bird, rn g (Charles Jencks) 3 4
Time, 1.10, 1.10.

The starter was Charles Crawford, and the judges G. W. Curtis, W. A. Lowry, W. A. Foley and John Kingroose landed Belles Stannal a winner from E. G. Babcock's Lady Walkill.

They are working fast at the mile track now. On Friday, the 20th, Searchlight stepped the mile circuit was held at Nashua, N. H., last week. It began on Tuesday and extended over four days, but rain interfered with the third day's racing on Thursday, and the entire programme was cleaned up on Friday. There was a fair attendance, and some excellent sport was seen.

Tuesday's card was made up of a three-minute trot and 2.25 pace. The Allandford mare, Alrura, was favorite in the three-minute trot, but after losing the opening heat, the brown mare Dorena, by Woodbrino, out of Dora, by Kolnitor, stepped to the front and won the next three heats. Alrura got a record of 2.24, and Dorena a mark of 2.25.

The 2.25 pace was a long-strung-out race. It took seven heats to decide it. The chestnut

mare Susan won the two opening heats and Agnes E. the next two. Then the chestnut mare Boratigh, that had been the contending horse in all four of these heats, managed to poke her nose to the front in the fifth heat and she won the next two and race.

There were some good contests on Wednesday. A field of ten horses faced the starter in the 2.20 pace, and it was an exciting contest for four heats. *Verline* and *May Queen* were the choice of the spectators.

Merry-go-Round, a bay gelding by Merriton, that has been kicked about from pillar to post for two or three years, and had been given up as a no-account, surprised everybody by trimming his kick, winning the first, third and fourth heats.

The track was in fair shape on Friday when the gelding, for he has had the horse only about a month.

The black mare Barnard, by Much Ado (2.13), out of Fanny Rice (2.14), by Gallioti, was made favorite for the slow pace, and she proved equal to her reputation. She won in one, two, three, four, stepping her miles in 2.22, 2.23, and 2.24. She looks like a very promising race mare.

Only one heat was raced off on Thursday, for the rain came down in torrents during the progress of this heat, and made it impossible to carry out the afternoon's programme. This was in the 2.17 pace, which *San Telmo* was picked to win. In a rattling brush through the stretch, *Reet Patches* beat both him and *Hugh Mack* (2.19).

The track was in fair shape on Friday when the horses were called up. *George L.* won the second heat of the postponed 2.17 pace in 2.17, but *Allie Snell* gathered in the next three and race.

On the strength of a workout mile in 2.16 at Combination Park, the black gelding *Sanny G.*, by Elial G., dam, Eva, by Hinder Wilkes, was made a top-heavy favorite for the 2.29 pace. He clearly showed that he had the speed to win, but he was not sufficiently well stayed up to last the race out. After winning the first two heats in 2.21 and 2.17, he was beaten out in the third and fourth in 2.23 and 2.30, and then had to be drawn on account of an attack of lameness. *Red Live* won the fifth and sixth heats in the absurdly slow time of 2.37 and 2.36.

The 2.15 class, trot, was not called, and the meeting wound up with the 2.22 pace, for which *Idie* thought was favorite. He won the opening heat in 2.24, then Fletcher out Lora J. loose and she won the next three very handily.

SUMMARIES.
Nashua, N. H., June 17, 1902—3.00 trot.
Pace, \$300.

Dorena, br m, by Woodbrino; dam, Dora, by Kolnitor (Fletcher) 2 1 1
Alrura, br m, by Allandford (Gordon) 1 2 3
Mary S., br m (Briscoe) 3 4 4
Anna Rose, b m (Cox) 5 4 4
Ivanhoe, br m (Lambourne) 5 5 5
Bertha E., b m (Morris) 6 6 6
Julius, ch m (Dempsey) 6 6 6
Time, 2.24, 2.24, 2.21, 2.21.

Same day—2.25 pace. Pace, \$300.
Boratigh, ch m, by Borat; dam, Miss Ada Wood, by Wittehood (Cox) 2 2 2 1 1 1
Susan, ch m, by Elgin Boy (Sunder) 1 1 1 3 3 2
Idie, b m, by Equity (Pope) 7 3 1 2 3 4
Blake, b h (Evans) 3 4 4 4 4 4
Heiler, b m (Woods) 2 5 5 5 5 5
Earle F., gr g (Taylor) 4 6 6 6 6 6
Ruth G., ch m (Lambourne) 6 7 7 7 7 7
Time, 2.23, 2.24, 2.24, 2.24, 2.20, 2.24.

Nashua, N. H., June 18, 1902—2.30 pace. Pace, \$300.

Merry-go-Round, b g, by Merriton; dam, Nelly, by Australis (Cox) 6 1 1
Verline, b m (Briscoe) 9 1 3 8
May Queen, b m (Sunderlin) 4 2 4 3
Baystone, b m (Gillmore) 2 4 4 7
Dad S., b g (Davis) 8 2 4 4
Gertie H., b m (Drury) 7 5 5 2
Genevieve, br m (Raisdon) 3 8 8 6
Nimrod, b g (Hay) 5 7 7 5
Crystal Red, ch g (Avard) 6 9 9 4
Delane, b m (Lambourne) 4 5 5 4
Time, 2.21, 2.19, 2.21, 2.21.

Same day—3.00 pace. Pace, \$300.
Boratigh, ch m, by Borat; dam, Miss Ada Wood, by Wittehood (Cox) 2 2 2 1 1 1
Susan, ch m, by Elgin Boy (Sunder) 1 1 1 3 3 2
Idie, b m, by Equity (Pope) 7 3 1 2 3 4
Blake, b h (Evans) 3 4 4 4 4 4
Heiler, b m (Woods) 2 5 5 5 5 5
Earle F., gr g (Taylor) 4 6 6 6 6 6
Ruth G., ch m (Lambourne) 6 7 7 7 7 7
Time, 2.23, 2.24, 2.24, 2.24, 2.20, 2.24.

Nashua, N. H., June 19, 1902—2.17 pace. Pace, \$300. One heat paced June 19.

Allie Snell, b h, by Allie Wilkes (Pope) 4 3 1 1 1
Reed Patchen, by Bourbon Patchen (Cox) 1 2 4 3 4
Georgia L., gr m, by Cuckoo (Rowser) 5 1 2 3 4
San Telmo, b g, by Arion (Gillespie) 3 4 4 4 4
Hugh Mack, b g, by The Baron (Batchelder) 5 2 2 5
Gail, b g, b m (Barker) 6 5 5 6 6 6
Time, 2.19, 2.17, 2.19, 2.19, 2.22, 2.23.

Same day—2.22 pace. Pace, \$300.
Red Live, ch g, by Artemas; dam, Thorought (Cox) 2 2 2 1 1 1
Blacksmith Maid, br m, by A. M. Calisto (Hire) 3 3 1 2 2 2
Sanny G., b m, by Elgin Boy (Sunder) 1 1 3 3 3 3
Lady Wingate, b m (Lambourne) 4 5 5 5 5 5
Time, 2.21, 2.17, 2.23, 2.24, 2.24, 2.23.

Same day—2.22 pace. Pace, \$300.
Lora J., b m, by Alcy; dam, Nellie O., by Allandford (Gordon) 1 1 1 1
Alicia Hubbard, ch m (Hubbard) 4 2 2 2
Della Benton, ch m (Fox) 6 5 5 3
Glen Onward, b g (Brule) 3 4 4 4
Brownstone, b g (Avard) 6 6 6 6
Idol Thought, b g, by Pedro (Lambourne) 1 3 3 3
Time, 2.23, 2.24, 2.24, 2.24, 2.21.

A report comes from Lexington to the effect that Charles Marvin recently drove a two-year-old by Wiggins (2.19) a mile over Ashland Park Farm track, which is a half-mile ring, quite close to 2.20.

W. J. Andrews has moved to the Hudson River Driving Park, Poughkeepsie, N. Y., with six head of the Ashland Farm horses, made up of Elsie S. (2.11), Helen Grace (2.11) and four colts by Stamboul (2.07).

General Notes.

Audubon Boy (2.06) has been a mile in 2.14.

Zembia (2.11) has been bred to Oakland Baron (2.04).

Lady of the Manor (2.04) has been bred to Direct Hal.

Chain Shot (2.04) worked a mile in 2.15 at Readville on Friday.

Jere O'Neil will move his horses from Lexington to Readville this week.

A race meeting will be held at Prince Albert, Northwest Territory, Aug. 12 and 13.

Rain has seriously interfered with the work of the trainers at the Cleveland track.

Bingen's book has been closed for the season, and several applicants have been refused.

Nancy Hanks foaled a beautiful bay filly by Bingen (2.04) on the 20th inst. at Forbes Farm.

John Shillinglaw and I. R. Blumenthal have opened a training stable at Charter Oak Park.

Dan Patch (2.04) will make his first start of the season at Oakley Park, Cincinnati, next week.

Wistful (2.11) died recently. She was owned by Alexander MacLaren, Buckingham, Quebec.

Willis O. Foote, of Rima (2.09) fame, has arrived at Joliet, Ill., from Texas with his stable of horses.

Manager Porter has issued the programme for his four-day meeting at Old Orchard the third week in July.

The Patchen Wilkes Farm stable of campaigners was shipped from Lexington to Cleveland last week.

A yearling filly out of *Estay* (2) (2.10), and sired by *Prodigal* (2.16), is said to be an impressive young trotter.

Stewart Chandler, son of the well-known trainer, J. B. Chandler, will campaign a stable of horses this year.

Ed Geers says that it's the extremely fast quarters, not the moderate miles, that kill off the horses at this season of the year.

The three-year-old colt Todd, by Bingen (2.04), was worked three miles the other morning around 2.45. He stepped one-quarter in thirty-seven seconds.

A two-year-old, by King Red (2.20), in Clem Beachey's stable at Lexington, Ky., recently stepped a mile in 2.29, the last half of it in 1.13, and final quarter in 35 seconds.

Both *Admiral* (2.17) and *Lillian S.* (2.24), new-comers to the list, were bred by Floyd Brothers, Bridgetown, Va., owners of Col. Sidney, sire of these new performers.

Gus Macey recently drove Country Jay (2.10) a half in 1.01, according to reports from Versailles, Ky. If this is true, it would look as though the gelding was in great form.

Only one heat was raced off on Thursday, for the rain came down in torrents during the progress of this heat, and made it impossible to carry out the afternoon's programme. This was in the 2.17 pace, which *San Telmo* was picked to win. In a rattling brush through the stretch, *Reet Patches* beat both him and *Hugh Mack* (2.19).

The track was in fair shape on Friday when the horses were called up. *George L.* won the second heat of the postponed 2.17 pace in 2.17, but <